



ACI NSW Agency
for Clinical
Innovation

Therapeutic Diet Specifications

FOR PAEDIATRIC INPATIENTS



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Produced by: ACI Nutrition Network

SHPN: (ACI) 120327

ISBN: 978 1 74187 882 0

Further copies of this publication can be obtained from the
Agency for Clinical Innovation website at: www.aci.health.nsw.gov.au

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Published: November 2012, Version 1

HS12-028

FOREWORD

The Agency for Clinical Innovation (ACI) was established by the NSW government as a board-governed statutory health corporation in January 2010, in direct response to the Special Commission of Inquiry into Acute Care Services in NSW Public hospitals. The ACI seeks to drive innovation across the system by using the expertise of its clinical networks to develop and implement evidence based standards for the treatment and care of patients.

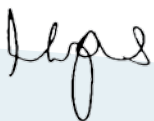
In April 2009, the ACI (then known as GMCT) established the Nutrition in Hospitals (NIH) group to provide clinical expertise to NSW Health in developing an integrated approach to optimising food and nutritional care in NSW public healthcare facilities. The ACI NIH Group includes doctors, nurses, dietitians, speech pathologists, consumers, academics, food service and health support services.

The ACI under the auspices of the NSW Health Nutrition and Food Committee developed a suite of nutrition standards and therapeutic diet specifications for adult and paediatric inpatients in NSW hospitals. These standards form part of a framework for improving nutrition care and food in hospitals. The suite of nutrition standards includes:

1. *Nutrition standards for adult inpatients in NSW hospitals*
2. *Nutrition standards for paediatric inpatients in NSW hospitals*
3. *Therapeutic diet specifications for adult inpatients*
4. *Therapeutic diet specifications for paediatric inpatients*

In September 2010, ACI commissioned Ms Sheridan Collins, Senior Paediatric Dietitian, to develop the “Therapeutic diet specifications for paediatric inpatients” on behalf of the Nutrition and Food Committee, NSW Health.

On behalf of the Agency for Clinical Innovation, I would like to thank Sheridan Collins, the members of the Paediatric Nutrition Standards Reference Group chaired by Prue Watson and Helen Kepreotes, and the NIH group co-chaired by Helen Jackson for their dedication and expertise in developing these specifications.



Nigel Lyons

Chief Executive and Co-Chair, Nutrition in Hospitals
Agency for Clinical Innovation

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INTRODUCTION

Background

This document was developed to supplement the *Therapeutic diet specifications for adult inpatients (2011)* to define therapeutic diets for children in hospital.

In 2008, a consistent set of naming conventions and definitions for diets was developed by the NSW Health Nutrition & Dietetic Advisors Group (NSW Health Therapeutic Diet Specification Part One). *Nutrition standards for adult inpatients in NSW hospitals (2011)* were developed for adults to define basic food and nutrition needs of inpatients in NSW hospitals. *Nutrition standards for paediatric inpatients in NSW Hospitals (2011)* were similarly developed by an expert reference group, to indicate nutrient needs of children of varying ages and developmental feeding capabilities. The Paediatric Nutrition standards meet the needs of nutritionally well and nutritionally at-risk patients.

Nutritionally well patients include previously healthy patients with good appetite and dietary needs in line with the general population admitted for minor illnesses and for a short stay. Nutritionally at-risk patients include those who have poor appetites, inadequate food intake, weight loss, physical difficulty eating or drinking, cognitive or communicative difficulties with ordering food.

The Paediatric Nutrition standards however do not meet the needs of children with therapeutic dietary requirements for recognised diagnoses. These Paediatric Therapeutic Diet Specifications have been developed to address the needs of patients with higher nutritional needs or special nutritional needs as dictated by medical diagnoses.

Patients with higher nutritional needs include those with increased nutritional requirements due to cachexia, trauma, surgery and/or burns and failure-to-thrive. Patients with special nutritional needs include patients with cultural or religious dietary needs and practices, patients requiring therapeutic diets due to specific disease states; patients requiring texture modified food and fluids.

Principles for Paediatric Diet Specifications

The nutritional care of paediatric patients must address issues of growth and development as well as tissue maintenance, repair and nutrient metabolism.

Some therapeutic diet specifications developed for adults may be suitable for use in paediatrics. This will be noted for each diet under the heading "Paediatrics" within the *Therapeutic diet specifications for adult inpatients (2011)*.

For paediatrics, the following additional therapeutic diet specifications are required:

1. Age-appropriate diets

Nutritional requirements for children differ from adults and so differing quantities of food groups are needed to meet needs for growth and development. Developmental and age-related diets for children of ranging ages are required to ensure that serving sizes, type of food and texture of foods offered are suitable and that the diet meets nutrient needs for age. (Refer to the *Nutrition standards for paediatric inpatients in NSW hospitals, 2011*, for Minimum Menu Choice standard for serve size requirements for varying ages).

2. Therapeutic Diets

Macro/Micronutrient Specific Diets. Diets for macro-/micro-nutrients that provide appropriate restrictions for children are required while allowing adjustment for growth needs. Balance of the overall

nutrient profile may be difficult to achieve if an ingredient or nutrient is set at a fixed level of intake. For diets that do require quantitative nutrient levels, the relevant nutrient target for each main meal component may need to be specified.

Diets for medical conditions. Medical conditions that mainly occur in paediatrics and require multiple nutrient adjustments require a specific therapeutic diet to ensure all diet requirements are included (eg ketogenic diet; metabolic diets; Cystic Fibrosis; paediatric diabetes).

Aims

This document provides detailed specifications for 30 therapeutic diets for paediatric in-patients used in NSW public hospitals.

The specifications:

- describe the foods allowed/not allowed in each diet
- provide nutrient targets when required

The specifications aim to be:

- easy to read and interpreted by non-specialist staff (eg food service or nursing staff without access to a Dietitian)
- sufficiently detailed to support safe and appropriate meal provision to patients on therapeutic diets
- based on the best available evidence.

As with the adult diet specifications, the names of the diets are wherever possible, specific to the nutrient to be modified (eg High protein) rather than describing disease states (eg Failure-to-thrive). Where several nutrients need to be addressed, multiple diets can be used for the same patient (eg High energy, High protein). An age-appropriate diet is used for all paediatric patients to ensure appropriate food and serve size for age (eg High energy, High protein, 1-3 years).

This clearly describes the exact nature of the diet, and recognises the importance of planning diets to meet patients' individual needs, rather than applying standard protocols. The exceptions to this (ketogenic, diabetic and Cystic Fibrosis diets), acknowledge the widespread use and understanding of these terms.

Not all paediatric diets will be required by every hospital, network or Local Health District. Clinical need and the clinical nutrition service will determine the range of therapeutic diets required for each facility.

Methodology

An Expert Reference Group was established to oversee the development of these specifications (see Appendix for membership). The Expert reference group decided the range of diets to be included, agreed on a standard template to present the specifications, and advised on the consultation and approval processes.

Sheridan Collins, Senior Paediatric Dietitian Sydney Children's Hospital Network Westmead, was engaged as a consultant to develop a draft of the diets using the agreed standard template. The diets are based on:

- existing diet standards used by NSW Health facilities
- the Dietitians Association of Australia *Nutrition Manual (8th edition)*
- the American Dietetic Association *Paediatric Nutrition Care Manual*
- nationally endorsed dietetic practice guidelines
- standard textbooks of dietetic practice.

Where these sources provided insufficient evidence-based information targeted literature searches were undertaken to locate primary published literature to inform the diet specifications.

Advice was sought of the expert reference group formed for the development of the Adult Diet Specifications and of paediatric dietitians in NSW. Draft diet specifications were circulated to Local Health Districts with invitation for comment. A list of respondents is given in the Appendix. Appropriate suggested changes were incorporated and approved by the expert reference group, and a revised version was sent to the NSW Health Nutrition and Dietetic Advisors group and the Speech Pathology Advisors group for review. A final version was then submitted to the Nutrition and Food committee of NSW Health for approval and endorsement.

INFORMATION FOR USERS

Content of the Specifications

These diet specifications give guidance about the type and quantities of foods that would be suitable for paediatric in-patients ordered a range of therapeutic diets.

Food preferences (eg nil beef, nil mushrooms) are not regarded as therapeutic diets and therefore not included in these specifications. The normal menu selection processes should accommodate such preferences.

As with the Adult Diet Specifications:

For each diet the following information is provided:

- **'Aim'** describes the broad objective of the diet with any quantitative daily targets.
- **'Characteristics'** describes the general patterns of foods used in the diet.
- **'Nutrition diagnosis'** notes the most likely diagnosis listed in the *International Dietetics and Nutrition Terminology Reference Manual* (2nd edition). *Nutrition Diagnosis has not been included for Age-appropriate diets as these diets are age-related to meet normal nutrient requirements rather than related to a specific nutritional deficiency.*
- **'Indications'** lists some common medical or surgical conditions for which the diet is often prescribed.
- **'Nutritional adequacy'** provides an assessment of whether the diet is adequate alone or whether it needs supplementation to be nutritionally adequate.
- **'Precautions'** gives instructions or warnings relevant to the use of the diet in hospitals.
- **'Specific Menu Planning Guidelines'** lists the foods that are allowed or not allowed on the diet.
- **'References'** gives a selection of authoritative sources of information supporting the diet specifications.

Use of the Specifications

Any therapeutic diet or texture modification from either paediatric or adult diet specifications should be teamed with the age-appropriate diet to ensure foods are developmentally appropriate and that textures are manageable. The age-appropriate diets include: "infant", "toddler", "child", and "adolescent".

Examples:

- An 8 year old who is from a vegetarian family (including milk and eggs) would be ordered as: child 4-8 years, vegetarian including milk and eggs.
- A 14-year-old girl with wheat and milk allergies would be ordered as: adolescent 14-18 years, wheat free, milk free.
- A 2 year old for a faecal fat test would be ordered as: 1-3 years, test-faecal fat.
- A 10-year-old child would be ordered as: child 9-13 years.
- A 6-month-old infant starting solids for the first time would be ordered as: Infant first foods.
- A 3-month-old infant who is only breastfed would be ordered as: breastfed and/or infant formula fed alone.
- A 7 year old who has had oral surgery would be ordered as: child 4-8 years, smooth puree.

Precautions:

Some combinations of adult and paediatric diets require caution (eg: restrictions of electrolytes, protein, fat etc). Some of these diets must be adjusted under the direction of clinical dietitians. Some paediatric diets require further meal planning and manipulation by a dietitian to ensure nutrient sufficiency (eg Metabolic Low Protein; Ketogenic; Eating Disorder etc).

Diet Availability

- Paediatric meals need to be provided for the next meal following patients' admission.
- Paediatric diets may require extra meal planning and food preparation.

Diet Prescription

These specifications do not attempt to define the appropriate diets to be prescribed for individual patients. Diets must not be automatically ordered for patients with the medical or surgical indications noted in the specifications because a very restrictive diet may prevent good nutritional recovery for patients, who are already undernourished or eating poorly.

Appropriate health professionals may alter the diets to meet individual patients' needs. For example, some patients on soft diets may not tolerate bread, and this would need to be noted at the time of ordering that diet.

Foods Allowed/Not Allowed

In the specific menu planning guidelines, it is not possible to list all foods or recipe items that might be suitable or unsuitable. Specific guidelines and some common examples are usually included, but other foods or dishes might also be suitable or unsuitable, depending on their nutritional profile, ingredients and texture.

Trade names of some common product examples have been used to clarify the intention of the guidelines, but their inclusion does not imply endorsement or recommendation of these products, nor indicate that other similar products are unsuitable.

These specifications are designed for patients in hospital; they are not intended as education material for patients prescribed therapeutic diets. For this reason they do not mention foods that would not normally be available in hospitals, for example: alcoholic beverages, take-away foods, and specialty gourmet items.

Food Availability

Not all products listed as being allowed for a specific diet will be available at all sites and some foods may be reserved for use in therapeutic diets only.

Nutritional Supplements

These specifications do not attempt to indicate which nutritional supplements comply with each diet, since it is assumed that a dietitian will order the type and volume of supplements according to the patient's individual needs. In many cases other nourishing foods, such as flavoured milk or yoghurt, are suitable alternatives to commercial supplements.

Rare Diets

These specifications cover diets commonly used across NSW public hospitals. They do not include special diets designed for research purposes or particular treatment situations. The local dietitian will need to specify those diets and communicate with the food service about feasibility and implementation.

Review of Specifications

These specifications are initially endorsed until October 2014. Ongoing evaluation and revisions will be managed by the Nutrition in Hospitals group within the Agency for Clinical Innovation.

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PAEDIATRIC AGE-APPROPRIATE DIETS

Diet: Breastfed and/or Infant formula fed alone

Aim: To identify patients who are receiving exclusive breastfeeding and/or infant formula, without any solid foods. No food is to be given.

Characteristics: No food offered. Fluids consist of breastmilk and/or formula and may include water.

Indications: For infants under 6 months of age who have not yet started solids, or patients where solid food is contra-indicated (eg Dysphagia). May be combined with a thickened fluid diet order.

Nutritional adequacy: Nutritionally adequate. Breastmilk and/or infant formula provide complete nutrient requirements if age appropriate.

Precautions: Breastfeeding is the best source of nutrition for infants in their first year of life. WHO recommendations are for exclusive breastfeeding for 6 months and for continuation of breastfeeding until the age of 2 years or beyond. To optimize effective breastfeeding during hospital admission, an environment conducive to breastfeeding needs to be provided. Facilities for expressing and access to a lactation consultant may be of benefit.

Permission should be sought from a parent/guardian before giving infant formula, particularly for breastfed infants or infants fed expressed breastmilk. Infants need to be supported while feeding and supervised at all times. Prop feeding with a bottle can contribute to choking and dental caries.

Water is not required, but if offered must be boiled and cooled. To ensure safety and hygiene, formula must be prepared using sterile/cool, boiled water and sterilized equipment and bottles in a dedicated formula preparation room if possible according to Food Safety Standards.

Requires regular monitoring to ensure solids are introduced at an appropriate time.

Infants may be given fruit puree/gel if required as a mode of administering medications as prescribed by a physician, where that medication cannot be modified or given in a liquid form.

Note: Preterm infants should not be given thickener.

Specific menu planning guidelines:

	ALLOWED	NOT ALLOWED
Hot main dishes	None	All
Sauces, gravies	None	All
Starchy vegetables/pasta/rice	None	All
Vegetables	None	All
Soups	None	All
Sandwiches	None	All
Salads, dressings	None	All
Breads, cereals	None	All
Spreads	None	All

	ALLOWED	NOT ALLOWED
Hot breakfast choices	None	All
Fruit	None	All
Yoghurt	None	All
Desserts	None	All
Milk and cheese	None	All
Beverages	Breastmilk, infant formula and cooled boiled water only	All others
Biscuits	None	All
Miscellaneous	Starch based, locust bean (carob bean) gum and guar gum thickeners for thickening EBM or formula for term infants only No others	All others Xanthan gum based thickeners for thickening EBM or formula

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Diet: Breastfed and/or Infant Formula fed and Solids

Aim: To identify patients who are breast fed and/or infant formula fed as well as on a solid diet so that an age-appropriate diet can be ordered.

Characteristics: Breastfed and/or infant formula and solids intake.

Indications: All patients being breastfed and/or infant formula fed and feeding on solids.

This diet is used in conjunction with a diet selected to provide solids appropriate for age and stage of development of feeding skills.

May be combined with a therapeutic diet for dietary restriction or special requirements.

Nutritional adequacy: Nutritionally adequate.

Both breastmilk and/or infant formula and solids are required for nutritional adequacy. Selection of appropriate diet code is required in addition to this code. The proportion of contribution of breastmilk/infant formula towards nutrition will vary individually according to age, feeding patterns and developmental stage. The provision of a hospital environment conducive to breastfeeding will assist in maintaining usual breastfeeding patterns, eg rooming in.

Precautions: Breastfeeding is the best source of nutrition for infants in their first year of life. WHO recommendations are for exclusive breastfeeding for 6 months and for continuation of breastfeeding until the age of 2 years or beyond. To optimize effective breastfeeding during hospital admission, the maternal diet needs to be adequate; and an environment conducive to breastfeeding needs to be provided. Facilities for expressing and access to a lactation consultant may be of benefit.

From 6 months, complementary solids need to be introduced to meet nutrient needs, however these may be introduced from 4 months if indicated developmentally. Iron containing solids are particularly important from 6 months onwards as foetal iron stores are diminished. Major sources of iron include iron fortified infant cereals and red meat.

Permission should be sought from a parent/guardian before giving infant formula, particularly for breastfed infants or infants fed expressed breastmilk.

To ensure safety and hygiene, formula must be prepared using sterile/cool, boiled water and sterilized equipment and bottles in a dedicated formula preparation room if possible according to Food Safety Standards.

Infants may be given fruit puree/gel if required as a mode of administering medications as prescribed by a physician, where that medication cannot be modified or given in a liquid form.

Note: Preterm infants should not be given thickener.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	As per age and/or other paediatric diet order	
Sauces, Gravies	As per age and/or other paediatric diet order	
Starchy Vegetables /Pasta/Rice	As per age and/or other paediatric diet order	
Vegetables	As per age and/or other paediatric diet order	
Soups	As per age and/or other paediatric diet order	
Sandwiches	As per age and/or other paediatric diet order	
Salads, Dressings	As per age and/or other paediatric diet order	
Breads, Cereals	As per age and/or other paediatric diet order	
Spreads	As per age and/or other paediatric diet order	
Hot Breakfast Choices	As per age and/or other paediatric diet order	
Fruit	As per age and/or other paediatric diet order	
Yoghurt	As per age and/or other paediatric diet order	
Desserts	As per age and/or other paediatric diet order	
Milk and Cheese	As per age and/or other paediatric diet order	
Beverages	Breastmilk, infant formula and cooled boiled water only and as per other paediatric diet	
Biscuits	As per age and/or other paediatric diet order	
Miscellaneous	As per age and/or other paediatric diet order Starch based, locust bean (carob bean) gum and guar gum thickeners for thickening EBM or formula for term infants only	Xanthan gum based thickeners for thickening EBM or formula

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Diet: Infant first foods

Aim: To provide developmentally appropriate foods of a manageable consistency for first introduction of solids for infants.

Characteristics: A diet that conforms to the *Nutrition standards for paediatric inpatients in NSW hospitals* for infants from 0-6 months. First foods supplement breastmilk and/or infant formula. Developmentally appropriate foods include iron-fortified infant cereal, vegetables and fruits.

Foods are given individually ie. 1 ingredient only, with no combination foods given, to keep flavours separate and to allow the digestive system to adapt. Food is prepared without salt or sugar and with minimal fats.

Texture of food is smooth, uniform in consistency, and contains no lumps. Pureed food is finely strained.

Indications: For the introduction of solids.

Suitable for infants from around 6 months of age, when developmentally appropriate and at parent/carer discretion.

Suitable for infants who are nutritionally well and nutritionally at-risk.

Used in conjunction with continued breast and/or infant formula feeding.

May be combined with other therapeutic diets for children who have special or high nutritional needs.

This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate when first foods are used to complement breastmilk and/or infant formula.

Solids at this stage make minimal contribution to nutrient requirements. Breast milk and/or infant formula meets the majority of nutrient requirements if age appropriate.

½ serve size is appropriate to ensure sufficient food variety and manageable serve size.

Refer to the Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions: Breast milk and/or infant formula is the main source of nutrition throughout the early stages of introduction of solids. Introduction of complementary solids is not advised before 17 weeks and should not be delayed beyond 26 weeks. Introductory solids need to be offered after breast milk or formula feed or at a separate time so they do not detract from feed volume taken.

Appropriate seating giving support to the head and neck should be available. Age appropriate cutlery should be used.

Infants need to be supervised at all times when feeding to prevent choking.

Note: this diet is only for first introduction of solids; once solids are established the infant progresses to a more advanced solid diet as is developmentally-appropriate. Requires regular monitoring to ensure solids are tolerated, and that adequate amounts are provided in keeping with the child's nutritional and experiential needs.

For children with altered nutrition needs, additional therapeutic diet orders will affect textures and foods allowed.

Specific menu planning guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	None	All. Meats, eggs, combination foods
Sauces, Gravies	None	All
Starchy Vegetables /Pasta/Rice	½ serve size Potato pureed to a smooth texture and finely strained	Pasta/rice, combination dishes
Vegetables	½ serve size Cooked. All pureed to a smooth texture and finely strained (eg beans, broccoli, carrot, cauliflower, pumpkin, squash, sweet potato, zucchini)	Salad, uncooked vegetables, hard or stringy vegetables Nuts
Soups	None	All
Sandwiches	None	All
Salads, Dressings	None	All
Breads, Cereals	Iron-fortified infant cereals, strained porridge All cereals to be pureed to a smooth texture and finely strained	Bread, crunchy cereals, cereals with nuts or hard pieces, or that cannot be finely strained Unprocessed bran
Spreads	None	All
Hot Breakfast Choices	None	All
Fruit	Soft cooked or canned fruit – all pureed to a smooth texture and finely strained (eg canned/cooked pear, apple, apricot, peach)	Raw fruit Cooked fruit whole or in large pieces
Yoghurt	None	All
Desserts	None	All
Milk and Cheese	None	All cow, goat milk
Beverages	Breast milk and/or infant formula as the primary source of nutrition while solids are being established Water	All milks Soy beverage Juice, soft drinks, tea or coffee
Biscuits	None	All
Miscellaneous	Starch based, locust bean (carob bean) gum or guar gum thickeners for thickening EBM or formula	Xanthan gum based thickeners for thickening EBM or formula Salt, sugar or fat in food preparation Salt, pepper, sugar sachet Honey, nuts, popcorn, alcohol

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Diet: Infant 6 months+

Aim: To provide a developmentally appropriate range of solids of manageable texture for children from approximately 6 months of age who have been introduced to solids and are ready for a puree texture.

Characteristics: A diet that conforms to the *Nutrition standards for paediatric inpatients in NSW hospitals* for infants 6-12 months of age. Infant solids supplement breast milk and/or infant formula.

Developmentally appropriate foods include infant cereals, vegetables, fruits, dairy, eggs, bread, meat and meat products, chicken and fish.

Foods are given individually ie. 1 ingredient only, with no combination foods given, to keep flavours separate and to allow digestive system to adapt. Food is prepared without salt or sugar and with minimal fats.

Texture of food is pureed to a thick but uniform consistency and may contain soft lumps. No hard or crunchy food is offered. Dissolvable and very soft solids are included such as soft fresh fruit, cheese sticks and infant rusks.

Indications: Suitable for infants from 6-12 months, when developmentally appropriate and at parent/carer discretion.

Suitable for infants who are nutritionally well and nutritionally at-risk.

May be combined with other therapeutic diet orders for children who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Solids at this stage make partial contribution to nutrient requirements. Breast milk and/or infant formula provides most of nutrient requirements if age appropriate.

½ serve size is appropriate.

Refer to the Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions: Breast milk and/or infant formula is the main source of nutrition in the early stages of introduction of solids. In the early stages of solids progression, solids are offered after breast milk or formula feed or at a separate time so they do not detract from feed volume taken. As infants progress, solids are offered before breastmilk or formula feed.

In early stages of solids progression, single ingredient foods are offered, with a new food every 2-3 days to allow easier identification of any foods which may trigger allergic reaction or be difficult to digest. Fruits, vegetables and cereals are usually offered first, followed by dairy, eggs and meat. Cereals should be iron fortified. Menu items can be chosen depending on stage of each individual infant in progression with solids.

Care should be taken to choose food that is suitable for the child's age and stage of development.

Texture progression will develop at different rates in individual children.

Appropriate seating giving support to the head and neck should be available. Age appropriate cutlery should be used. Infants need to be supervised at all times when feeding to prevent choking.

Note ½ serve sizes to ensure sufficient food variety and manageable serve size.

For children with altered nutrition needs, additional therapeutic diet orders will affect textures and foods allowed.

Specific menu planning guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	½ serve size Preferably one ingredient only Meats, chicken, fish pureed to a thick moist texture Pureed legumes with no husk in final puree	Large lumps Foods thicker than pureed texture
Sauces, Gravies	Gravy Cheese-based/white sauce without lumps	Spicy or highly flavoured sauces Sauces with lumps
Starchy Vegetables /Pasta/Rice	½ serve size Smooth mashed potato	Pasta, Rice
Vegetables	½ serve size Smooth mashed sweet potato/pumpkin All other vegetables – cooked, pureed	Salad, uncooked veg
Soups	None	All
Sandwiches	None	All
Salads, Dressings	None	All
Breads, Cereals	Iron-fortified infant cereals Strained porridge	All others
Spreads	None	All
Hot Breakfast Choices	Scrambled/boiled egg Baked beans pureed	All others
Fruit	Mashed soft fresh fruits (eg bananas, kiwifruit, watermelon) Finely diced or pureed canned or stewed fruit	Hard uncooked fruits (eg apple) Dried fruit
Yoghurt	Smooth lump-free yoghurt	Fruit yoghurts with visible pieces or seeds
Desserts	Plain vanilla or egg custard Creamy rice	All other desserts (eg icecream, jelly, cakes)
Milk and Cheese	Full fat cows' milk with cereal Full fat cows' milk not preferred as main beverage for infant under 12 months of age Cheese – grated, sliced or melted	Cows' milk as main beverage for infants under 12 months of age
Beverages	Breast milk Infant formula Water Full fat cows milk if over 12 months of age	Juice, cordial, soft drinks, tea or coffee Cows' milk as main beverage for infants under 12 months of age Reduced fat milks
Biscuits	Infant rusks	All others
Miscellaneous	Starch based, locust bean (carob bean) gum and guar gum thickeners for thickening EBM or formula or other fluids	Xanthan gum based thickeners for thickening EBM or formula or other fluids Salt, sugar in meal preparation Salt, pepper, sugar sachet Nuts, popcorn, alcohol

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Diet: Infant 7-12 months

Aim: To provide a developmentally appropriate range of solids of manageable texture for children 7-12 months of age who are tolerating purees and are ready for texture progression to mashed, cut-up and finger food.

Characteristics: A diet that provides a minced or mashed meal for infants as a progressive step following the introduction of puree solids foods. Meets the *Nutrition standards for paediatric inpatients in NSW hospitals* for infants 7-12 months of age. Main beverage continues to be breast milk and/or infant formula until 1 year of age.

Developmentally appropriate foods include cereals, vegetables, fruits, dairy, eggs, bread, pasta, rice, meat and meat products, chicken and fish.

Foods are given in combinations as well as individually ie. casseroles. Food may be prepared with small amounts of salt, sugar and fats. Strong flavours are avoided.

Texture of food is minced and mashed to a thick and variable consistency, containing lumps (max 0.5cm pieces). Finger foods are offered such as soft fresh fruit, cheese sticks, and plain biscuits. Dissolvable solids are preferable. Soft foods that are easily mashed with a fork and soft bread can be included.

Indications: Suitable for infants from 7 months, when developmentally appropriate and at parent/carer discretion.

Suitable for infants who are nutritionally well and nutritionally at-risk.

May be combined with other therapeutic diet orders for children who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Solids make a considerable contribution to nutrient requirements. However, breast milk and/or infant formula still forms an essential part of nutrient intake. This will vary depending on each individual child and their progress with solids.

Note ½ serve sizes to ensure sufficient food variety and manageable serve size.

Refer to the Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions: Care should be taken to choose food that is suitable for the child’s age and stage of development.

Texture progression will develop at different rates in individual children. Inappropriate textures can present a safety risk to the child. Non-progression of solids can lead to later difficulties as children become used to a certain texture.

Solids should be offered before breast or formula to meet developmental and nutrition needs.

Breast milk or formula are still important in nutrient intake but can be given less frequently. Individual differences will depend on progression with solids. Cereals should be iron fortified.

Appropriate seating giving support to the head and neck should be available. Age appropriate cutlery should be used.

Infants need to be supervised at all times when feeding to prevent choking.

For children with altered nutrition needs, additional therapeutic diet orders will affect textures and foods allowed.

Specific menu planning guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<ul style="list-style-type: none"> ½ serve size Coarsely minced, tender meats or fish with a sauce Casserole dishes may be blended or mashed to reduce particle size Very soft egg dishes (eg scrambled eggs, soft frittata) Well cooked legumes, partially mashed and blended (eg baked beans) Soft tofu, in small pieces or blended 	<ul style="list-style-type: none"> Sliced roast meats or grills Meats with gristle Crumbed or fried fish Dishes with pastry (eg spinach pie, quiche, pizza) Casseroles with large pieces (eg chicken cacciatore) Dishes with crisp topping Strong spices and flavours
Sauces, Gravies	All others	Strongly spiced and flavoured

	ALLOWED	NOT ALLOWED
Starchy Vegetables/ Pasta/Rice	½ serve size Mashed potato Small moist pieces of pasta Well cooked rice with plenty of sauce	Dry roast/baked potato Crunchy potato Boiled new potato Rice that does not hold together Crisp or dry pasta
Vegetables	½ serve size Tender cooked vegetables that are easily mashed with a fork (eg carrots, pumpkin, sweet potato) or dissolvable Cooked pureed vegetables (eg roast pumpkin pieces, cooked zucchini) Soft uncooked vegetables (eg tomato, avocado)	Hard, raw vegetables
Soups	None	All
Sandwiches	All with soft fillings, cut up, using allowed breads	Crunchy/hard/stringy fillings Roast meats
Salads, Dressings	None	All
Breads, Cereals	Soft sliced bread – white and wholemeal with crusts Cooked breakfast cereals and ready to eat cereals that soften (eg Weet-Bix™) Iron-fortified infant cereals	Toast Bread with seeds or fruit, bread rolls Breakfast cereals not softened by soaking (eg toasted muesli) Unprocessed bran
Spreads	All	
Hot Breakfast Choices	Scrambled or poached eggs (chopped), baked beans, canned spaghetti, creamed corn	All others (eg fried eggs, crispy bacon, sausages)
Fruit	Mashed soft fresh fruits (eg banana, kiwifruit, watermelon) Finely diced or pureed canned or stewed fruit	Hard pieces of fresh fruit (eg apple pieces >0.5cm, grapes) Dried fruit
Yoghurt	All yoghurt and Frûche® (including soft fruit)	
Desserts	Custard, creamy rice	Any desserts with fruit pieces, seeds, nuts, crumble, pastry or non-pureed garnishes Cakes Icecream Jelly High fat/sugar desserts
Milk and Cheese	Full fat cows' milk with cereal Cheese	Cows' milk as main beverage for infants under 12 months of age Reduced fat milks
Beverages	Breast milk Infant formula Water	Juice, cordial, soft drinks, tea or coffee Cows' milk as main beverage for infants under 12 months of age Reduced fat milks
Biscuits	Plain biscuits or crackers	Cream biscuits, choc coated biscuits Highly salted, highly flavoured biscuits Biscuits with nuts or hard pieces that don't dissolve

	ALLOWED	NOT ALLOWED
Miscellaneous	Starch based, locust bean (carob bean) gum and guar gum thickeners for thickening EBM or formula or other fluids	Xanthan gum based thickeners for thickening EBM or formula or other fluids Salt, sugar in meal preparation Salt, pepper, sugar sachet Nuts Popcorn Sultanas Alcohol

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Diet: 1-3 years/Toddler

Aim: To provide a balanced diet with a variety of foods for children 1-3 years of age who are managing a range of textures, finger food and family foods.

Characteristics: Diet contains adequate and varied nutrition for optimal growth and development in children aged 1-3 years from developmentally appropriate foods. A wide range of foods from all food groups is included. Meets the *Nutrition standards for paediatric inpatients in NSW hospitals*.

Food texture is generally soft to slightly firm, including foods that can be easily chewed, but require minimal biting, although a wide range of textures is available to allow progression in texture management. Foods may need to be cut up. Snacks contribute significantly to nutrient intake because of the wide variation in the amount of food eaten at different meal times.

Indications: Suitable for children from 1-3 years of age, when developmentally appropriate and at parent/carer discretion. Suitable for infants who are nutritionally well and nutritionally at-risk.

May be combined with other therapeutic diet orders for children who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Note ½ serve sizes to ensure sufficient food variety and manageable serve size.

Refer to Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions:

Solids provide a much larger contribution to nutrient intake than breast milk or cows' milk so are offered first.

Breast milk and/or cows' milk are still important in nutrient intake but are required less frequently. Amounts will depend on individual age, growth and stage of solids development. Stage of progression with solids will determine appropriate textures for each individual.

Food should not be tough, stringy and should be without fat, gristle or bone. Food that can break into small hard pieces are not allowed as they may present a choking hazard.

Appropriate seating giving support to the head and neck should be available at younger range of age group. Age appropriate cutlery should be used. Young children still need supervision when feeding in case of choking.

For children with altered nutrition needs, additional therapeutic diet orders will affect textures and foods allowed.

Specific menu planning guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	½ serve size Soft dishes that can be mashed with a fork (eg tuna/salmon mornay, soft macaroni cheese, flaked fish, cottage pie) Soft dishes cut up (eg lasagne, smooth quiche with crumbly base, fish cakes, crepes) Roasts, diced or minced, with or without gravy Crumbed or fried fish (eg fish cakes, fish fingers) Well-cooked legumes (eg baked beans)	Meat with gristle Dishes with hard pastry (eg spinach pie, regular quiche, pizza) Casseroles with large pieces (eg curried prawns) Dishes with crisp topping Strong spices and flavours
Sauces, Gravies	All others including mild herbs and spices	Strongly spiced and flavoured (eg chilli, cayenne)
Starchy Vegetables /Pasta/Rice	All ½ serve size	

	ALLOWED	NOT ALLOWED
Vegetables	½ serve size All cooked vegetables to be mashed or cut up and served in small pieces or finger sized strips Cut up or grated raw vegetables	All others (eg corn cob) Hard raw vegetables
Soups	None	All
Sandwiches	All	
Salads, Dressings	All others	Raw onion, radish
Breads, Cereals	All	Unprocessed bran
Spreads	All	
Hot Breakfast Choices	All	
Fruit	All Dried fruit in cooking	Dried fruit as a snack/item
Yoghurt	All (full cream preferred)	
Desserts	All	Any with hard pastry
Milk and Cheese	All milks (full cream milk preferable as main beverage) Breastmilk All cheese	
Beverages	All others	Soft drink, tea, coffee
Biscuits	Plain biscuits or crackers, biscuits containing dried fruit	Cream biscuits, choc coated biscuits Biscuits with nuts, or hard pieces that don't dissolve
Miscellaneous	Starch based, locust bean (carob bean) gum and guar gum thickeners for thickening EBM or formula or fluids	Xanthan gum based thickeners for thickening EBM or formula or other fluids Salt, pepper sachet Nuts Popcorn Hard lollies Alcohol

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Diet: Child 4-8 years

Aim: To provide a balanced diet with a variety of foods for children 4-8 years of age who are able to eat at an age appropriate level.

Characteristics: Diet contains adequate and varied nutrition for optimal growth and development in children aged 4-8 years from developmentally appropriate foods. A wide range of foods from all food groups is included. Meets the *Nutrition standards for paediatric inpatients in NSW hospitals*. Reduced fat dairy is recommended.

A wide range of textures is provided.

Snacks contribute significantly to nutrient intake because of the wide variation in the amount of food eaten at different meal times.

Indications: Suitable for children 4-8 years of age who are nutritionally well and nutritionally at-risk. May be combined with other therapeutic diet orders for children who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Note ½ serve sizes is appropriate to ensure sufficient food variety and manageable serve size.

Refer to Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions:

At all ages children's individual growth and development will result in a wide range of appetite.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All ½ serve size	
Sauces, Gravies	All	
Starchy Vegetables/Pasta/Rice	All ½ serve size	
Vegetables	All ½ serve size	
Soups	None	All
Sandwiches	All	
Salads, Dressings	All	
Breads, Cereals	All	
Spreads	All	
Hot Breakfast Choices	All	
Fruit	All	
Yoghurt	Reduced fat yoghurt preferable	
Desserts	All	
Milk and Cheese	All, reduced fat milk preferable	
Beverages	All others	Tea, coffee
Biscuits	All	
Miscellaneous		Alcohol

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Diet: Child 9-13 years

Aim: To provide a balanced diet with a variety of foods for children 9-13 years of age who are able to eat at an age-appropriate level.

Characteristics: A diet that meets the *Nutrition standards for paediatric inpatients in NSW hospitals*. Medium serves. A wide range of foods from all food groups is included. A wide range of textures is provided.

Snacks contribute significantly to nutrient intake because of the wide variation in the amount of food eaten at different meal times.

Indications: Suitable for children 9-13 years of age who are nutritionally well and nutritionally at-risk. May be combined with other therapeutic diet orders for children who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Full serve size is appropriate.

Refer to Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions: At all ages children's individual growth and development will result in a wide range of appetite.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All	
Sauces, Gravies	All	
Starchy Vegetables/Pasta/Rice	All	
Vegetables	All	
Soups	All if local policy permits	
Sandwiches	All	
Salads, Dressings	All	
Breads, Cereals	All	
Spreads	All	
Hot Breakfast Choices	All	
Fruit	All	
Yoghurt	All, reduced fat yoghurt preferable	
Desserts	All	
Milk and Cheese	All, reduced fat milk preferable	
Beverages	All others	Tea, coffee
Biscuits	All	
Miscellaneous		Alcohol

References:

1. Agency for Clinical Innovation. *Nutrition standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
5. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics* Blackwell Publishing 3rd Edition
6. NHMRC *Australian Dietary Guidelines for Children and Adolescents 2012* <http://www.nhmrc.gov.au/guidelines/publications/n29-n30-n31-n32-n33-n34> (accessed 29 Mar 2012)

Diet: Adolescent 14-18 years

Aim: To provide a balanced diet with a variety of foods for adolescents 14-18 years of age who are able to eat at an age-appropriate level.

Characteristics: A diet that meets the *Nutrition standards for paediatric inpatients in NSW hospitals*.

Full serve is appropriate as well as access to extra serves and nutritious snacks to meet increased nutritional demands due to increased growth rate in adolescents.

A wide range of foods from all food groups is included. A wide range of textures is provided.

Indications: Suitable for adolescents 14-18 yrs of age who are nutritionally well and nutritionally at-risk. May be combined with other therapeutic diet orders for adolescents who have special or high nutritional needs. This diet may be combined with thickened fluids/texture modifications.

Nutritional adequacy: Nutritionally adequate.

Full serve size is appropriate.

Refer to Paediatric Nutrition Standards for Minimum Menu Choice standard for serve size requirements for varying ages.

Precautions: nil

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All	
Sauces, Gravies	All	
Starchy Vegetables/Pasta/Rice	All	
Vegetables	All	
Soups	All if local policy permits	
Sandwiches	All	
Salads, Dressings	All	
Breads, Cereals	All	
Spreads	All	
Hot Breakfast Choices	All	
Fruit	All	
Yoghurt	Reduced fat yoghurt preferable	
Desserts	All	
Milk and Cheese	All, reduced fat milk preferable	
Beverages	All	
Biscuits	All	
Miscellaneous	More snacks available if required	Alcohol

References:

1. Agency for Clinical Innovation. *Nutrition standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
5. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics*. Blackwell Publishing 3rd Edition
6. NHMRC *Australian Dietary Guidelines for Children and Adolescents 2012* <http://www.nhmrc.gov.au/guidelines/publications/n29-n30-n31-n32-n33-n34> (accessed 29 Mar 2012)

PAEDIATRIC THERAPEUTIC DIETS

Summary of Texture Modified Diets for Paediatrics

For infants and children requiring texture modified diets for dysphagia additional to developmental stages, the following diets are suitable when combined with an age-appropriate diet:

Soft <5 years

For children less than 5 years requiring a soft diet (texture A) see *Paediatric Diet Specifications*, pg 29, *Soft <5yrs Diet* and combine with an age appropriate diet.

Soft >5 years

For children 5 years and over requiring a soft diet (texture A) see *Therapeutic diet specifications for adult inpatients*, pg 30, *Soft Diet* and combine with an age appropriate diet.

Minced Moist

For infants and children with dysphagia requiring minced and moist (texture B) see *Therapeutic diet specifications for adult inpatients*, pg 34, *Minced Moist* and combine with an age appropriate diet.

For children <3 years of age with dysphagia, a puree diet is more appropriate due to tracheal size.

Smooth puree

For infants and children with dysphagia requiring smooth puree (texture C) see *Therapeutic diet specifications for adult inpatients*, pg 37, *Smooth Puree* and combine with an age appropriate diet.

No Mixed Consistency

For infants and children with dysphagia requiring No Mixed Consistency see *Therapeutic diet specifications for adult inpatients*, pg 39, *No Mixed Consistency* and combine with an age appropriate diet.

Thickened fluids

For children and adolescents with dysphagia requiring thickened fluids see *Therapeutic diet specifications for adult inpatients*, p133, *Fluid-mildly thick*, p134 *Fluid - moderately thick*, p135 *Fluid – extremely thick* and combine with an age appropriate diet.

For infants requiring Thickened fluids, thickened EBM or formula will be prescribed by a speech pathologist according to individual patient need.

Precautions:

For infants, children and adolescents with dysphagia:

Appropriate seating giving support to the head and neck should be available. Appropriate cutlery should be used with supervision at all times when feeding to prevent choking.

Note: the diet "Puree plus bread" is NOT suitable for children with dysphagia.

Diet: Soft <5 years

Aim: To provide a diet of soft-textured foods that can be easily chewed, requiring minimal biting and is suitable for infants and children less than 5yrs.

Characteristics: Texture A – soft. Foods in this category may be naturally soft (eg ripe banana), or cooked or cut up to alter texture. Minimal cutting should be required. Food should be easily broken up with a fork or able to be mashed in the mouth with the tongue against the palate. Harder-textured foods (eg meat, fibrous particles) need to be cut into particle size less than or equal to 0.8cm for infants and children under 5 years of age (due to tracheal size of <5 years). 0.8cm is the particle size of the final product to be presented. Note, meat pieces may shrink during cooking.

Food should be moist or served with a sauce or gravy to increase moisture content.

Sandwiches need to be without crusts and cut into quarters.

This diet texture can be applied to any portion size and most therapeutic diets.

Nutrition diagnosis: NC-1.1 Swallowing difficulty; NC-1.2 Biting/chewing difficulty.

Indications:

- oral surgery
- swallowing difficulties
- poor dentition
- painful mouth, gums or tongue (eg mouth ulcers, or following surgery of the mouth)

Nutritional adequacy: Nutritionally adequate, but may be low in dietary fibre. Patients ordered this diet should be monitored regularly to ensure adequate dietary intake.

Precautions: All foods to be naturally soft, minced or mashed, slightly firm but not tough or stringy, and without fat, gristle or bone. This diet is not necessarily a light diet (ie it can be spicy). All beverages, sauces and gravies must be thickened to the appropriate level for individuals also prescribed thickened fluids.

Please note: For children 5 years and over requiring a soft diet, the Soft diet outlined in the *Therapeutic diet specifications for adult inpatients* is appropriate.

For infants and children requiring minced and moist (texture B) use the Minced Moist diet specification from the *Therapeutic diet specifications for adult inpatients* and combine with an age appropriate diet.

For infants and children requiring smooth puree (texture C) use the Smooth puree diet specification from the *Therapeutic diet specifications for adult inpatients* and combine with an age appropriate diet.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	Soft dishes that can be mashed with a fork (eg tuna/salmon mornay, soft macaroni cheese, flaked fish, cottage pie, tofu) Soft dishes cut up (eg lasagne, smooth quiche with crumbly base, fish cakes, crêpes) Roasts diced or minced, with gravy (<0.8cm particle size) Well-cooked legumes (eg baked beans)	Sliced roast meats or grills Meat with gristle Crumbed or fried fish Dishes with hard pastry (eg spinach pie, regular quiche, pizza) Casseroles with large pieces (eg curried prawns) Dishes with crisp topping
Sauces, Gravies	All	
Starchy Vegetables/ Pasta/Rice	Mashed and scalloped potato Chopped pasta or well cooked rice with plenty of sauce	Roast or baked (including cut up) Jacket or boiled new potatoes Rice or pasta (if dry)
Vegetables	Most if soft enough to mash with fork Well cooked, cut up and served in small pieces (≤0.8 x 0.8 cm)	Raw vegetables Fibrous vegetables (eg corn, celery, broccoli stalks)

	ALLOWED	NOT ALLOWED
Soups	All	
Sandwiches	Soft sandwiches with crusts removed and cut into quarters Use moist fillings (eg diced or shaved chicken or ham, salmon, tuna, egg with mayonnaise)	Sandwiches with crusts or hard fillings Bread with seeds or grains
Salads, Dressings	None	All
Breads, Cereals	Soft sliced bread (white or wholemeal) with crusts removed and cut into quarters with spread Rolled oats, semolina, cold breakfast cereals moistened with milk, soft pancakes	Wholegrain and fruit breads and all bread rolls Hard cereals that do not soften easily (eg toasted muesli) Cereals with dried fruit, or seeds (eg Sultana Bran®, Just Right®)
Spreads	All	
Hot Breakfast Choices	Scrambled or poached eggs (chopped), baked beans, canned spaghetti, creamed corn	All others (eg fried egg, bacon, sausages)
Fruit	Soft canned fruit (eg pear halves, peaches, apricots, apple) Soft bananas, well-ripened paw-paw, chopped soaked prunes	Other fresh fruit Canned pineapple, stewed rhubarb
Yoghurt	All yoghurt and Frûche® (including soft fruit)	
Desserts	Milk-based soft dessert (eg custards, mousses, cut up trifle, creamy rice, puddings) Fruit crumble or plain cake with custard Icecream Jellied fruit with small fruit pieces (<0.8 x 0.8cm)	Any with hard pastry Dry cakes without custard
Milk and Cheese	All milk Cottage cheese, ricotta, camembert and soft cheddar (grated or soft cheese slices)	Hard cheeses Crisp cooked cheese topping on hot dishes
Beverages	All with a minimum amount of texture (pulp)	
Biscuits	Easily crumbled biscuits, (eg shortbread, Milk Arrowroot™, Milk Coffee™)	Hard biscuits and crackers (eg Anzac biscuits, Ginger Nut™ rice crackers)
Miscellaneous	Fortified pudding supplements Soft smooth chocolate	Nuts, seeds and coconut Cake with dried fruit Hard lollies

References:

1. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed.* Canberra: DAA.
2. Dietitians Association of Australia and The Speech Pathology Association of Australia Ltd. Texture-modified foods and thickened fluids as used for individuals with dysphagia: Australian standardised labels and definition. *Nutrition & Dietetics* 2007;64 (Suppl 2):S53-S76.
3. Litman RS, Weissend EE, Shibata D, Westesson P'L (2003). Developmental changes of laryngeal dimensions in unparalysed, sedated children. *Anesthesiology*, 98(1): 41-45

Diet: Allergy – Milk, Egg, Soy, Wheat, Seafood, Peanut and Tree Nut Free

Aim: To provide a diet suitable for patients with allergy to milk/dairy, egg, soy, wheat, seafood, peanut and tree nuts.

Characteristics: Foods free of milk/dairy, egg, soy, wheat, seafood, peanut, tree nuts and any food items containing them. Nutritious snacks are important to achieve energy needs, as well as specialised dietary products and supplements.

Indications: Multiple food allergy, Eosinophilic oesophagitis

Nutritional adequacy: Nutritionally adequate. Assessment and menu planning supervision by an on-site clinical Dietitian is required. Nutrition supplements may be required to meet patients' energy and/or nutrient needs.

Precautions: Should be initiated by a physician. An on-site clinical dietitian should be involved in the assessment and implementation of the diet. For children who do not need this level of food exclusion, the appropriate individual allergy diet(s) should be selected from the *Therapeutic diet specifications for adult inpatients* to maximise nutritional value and variety.

Note: Gluten is one of the proteins found in wheat, barley, oats and rye. If a product is gluten free it will be wheat free. In this diet only wheat protein is avoided. Oats, barley and rye are suitable. Glucose from wheat is suitable.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<p>All meats: lamb, beef, pork, chicken, duck, turkey, bacon, ham (wheat free), gluten-free, egg-free sausages</p> <p>Vegetarian main dishes containing fresh, dried, canned and frozen vegetables</p> <p>Chickpeas, legumes</p> <p>Gluten-free baked beans</p>	<p>Meat marinated in sauce</p> <p>Hamburgers containing egg and/or wheat</p> <p>Sausages, rissoles, meatloaf containing wheat, soy, egg</p> <p>Fish, Shellfish</p> <p>Egg white, yolk, dried, powdered, solids</p> <p>Tofu, soy cheese or soy drink</p> <p>Meats crumbed or battered in wheat flour/bread crumbs</p> <p>Meat/casseroles thickened with wheat flour</p> <p>Canned vegetables/legumes thickened with wheat</p> <p>Pizza base</p> <p>Pastry</p> <p>Main meals containing cream, cheese or milk</p>
Sauces, Gravies	<p>Gravies thickened with gluten free flours including cornflour, arrowroot, rice flour, potato flour, chickpea flour, tapioca flour, polenta</p> <p>Gluten free tomato sauce</p>	<p>Gravies thickened with wheat flour, semolina</p> <p>Cheese sauce, white sauce</p> <p>Soy sauce, miso, tamari</p> <p>Sauces made with egg, milk/dairy, wheat, fish, cream, cheese, sour cream</p> <p>Gluten containing tomato sauce</p>
Starchy Vegetables/ Pasta/Rice	<p>Plain potatoes, sweet potato, rice, including rice noodles, rice paper rolls</p> <p>Gluten-free pasta, including pasta made from corn, amaranth, quinoa, millet, buckwheat, vegetables</p>	<p>Coatings/batters containing wheat/egg/dairy</p> <p>Potato chips dusted in wheat flour, soy or dairy</p> <p>All pasta containing wheat, gluten, milk and egg</p> <p>Couscous, semolina</p>

	ALLOWED	NOT ALLOWED
Vegetables	All fresh, dried, canned and frozen vegetables	Canned vegetables and legumes thickened with wheat Canned vegetables in cream (eg mushrooms in butter sauce) Wheat flour coated or dusted potato wedges and potato chips Vegetables battered/crumbed in wheat flour/breadcrumbs
Soups	Soups made from allowed ingredients, including meat, vegetables, lentils, legumes (except soy and peanuts), rice and gluten-free pasta	Soups containing wheat, milk/dairy, egg, soy, nuts, cream
Sandwiches	Meat, chicken, salad vegetables, gluten-free ham and bacon All made on gluten-free bread/rolls made from the following: rice flour, oats, rye, barley, millet, buckwheat, polenta, corn, quinoa, tapioca, potato flour, sago, amaranth, sorghum, arrowroot, chickpea (Besan), lupin, lentil, pea, psyllium husk, polenta, Xanthan gum, guar gum Milk-free margarine	Egg, cheese, fish, seafood, tofu, sausage meats, salami Breads, rolls, muffins, bagels, crumpets containing wheat, milk/dairy, egg, soy, peanut and tree nuts Butter and most margarines
Salads, Dressings	Vegetables Potato Full bean mix White vinegar, oil, lemon juice Gluten-free tomato sauce Herbs and spices	Canned vegetables, vegetables thickened with wheat Milk, cream, cheese Soy Egg, mayonnaise Peanut or Satay sauce
Breads, Cereals	Rice cereal, puffed rice, rolled rice Infant rice cereal (gluten-free) Gluten-free cereals made from grains (eg corn, oats, rye, barley, millet, buckwheat, arrowroot, tapioca and other allowed cereals) Polenta Breads/cereals made from gluten-free grain/ flour (eg rice flour, oat flour, rye flour, barley flour, millet flour, buckwheat flour, polenta (corn meal), corn (maize) flour, quinoa, tapioca flour, potato flour, sago flour, amaranth grain, sorghum flour, arrowroot flour, chickpea (Besan) flour, lupin flour, lentil flour, pea flour, psyllium husk, polenta, Xanthum gum, guar gum Gluten-free bake mixes, etc Taco shells, white corn tortillas Gluten-free baking powder Dextrose (wheat) Pappadams	Breakfast cereals made from wheat, soy, milk/dairy, peanut and tree nuts Couscous All breads, rolls, muffins, bagels, crumpets containing wheat, rye, barley, oats, milk, egg, soy, peanut and tree nuts Wheat – and its varieties: plain flour, self raising flour, wheat germ, wheat meal, wheat bran, wheat starch Grains – and its varieties: spelt, kamat, durum, semolina/farina, bulgar (burghul), triticale, bread crumbs, baking powder, thickener numbers 1400-1450 (if derived from wheat), dextrin (wheat), modified starch (wheat)

	ALLOWED	NOT ALLOWED
Spreads	Milk free margarine Honey, jam, golden syrup, maple syrup Vegemite™	Butter, margarine containing milk, egg, soy, wheat, peanuts or treenuts All spreads containing milk, egg, soy, wheat, peanuts and tree nuts Peanut butter, nut spreads
Hot Breakfast Choices	Bacon (wheat free), gluten-free, soy-free and egg-free sausages Tomato, mushrooms Gluten free baked beans Gluten free spaghetti (no cheese) Gluten free hash-browns Gluten free creamed corn	Eggs Baked beans/creamed corn thickened with wheat flour Hash-browns containing wheat flour
Fruit	All fresh, canned, dried and frozen fruit	Fruits with pastry, cake, batter or sauces thickened with wheat flour
Yoghurt	None	All
Desserts	Jelly Iceblocks Sweetened toppings (gluten-free) Gluten-, soy-, milk-free cake mix Custard made on rice drink thickened with cornflour Milk and egg free sorbet and gelato Milk, soy, nut and egg free chocolate Cocoa	Icecream, milk puddings, custard Pastries Cakes containing wheat Desserts containing egg such as meringue, pavlova Chocolate containing milk, egg, soy and nuts All nuts
Milk and Cheese	Rice drink (fortified with calcium) Soy lecithin	Milk, soy beverage Custard and dairy desserts Butter, cheese Cream, sour cream, icecream
Beverages	Water Fruit juice, vegetable juice Rice drink Lemonade, cordial Black tea and herbal tea Coffee Caramel colour (wheat – no detectable gluten) Sweetened gluten-free toppings Cocoa and carob	Milk-based drinks, such as milkshakes, malted milk, flavoured milk Milo®, drinking chocolate Soy beverage Drinks containing Maltodextrin (wheat)
Biscuits	Rice crackers and cakes, corn crackers, corn thins Gluten, egg, milk, soy, and nut free biscuits and crackers	Biscuits and crackers containing gluten, egg, wheat, soy, milk, peanuts, treenuts

	ALLOWED	NOT ALLOWED
Miscellaneous	Salt, pepper, herbs Gluten, soy, egg, and dairy-free stocks/stock powder Selected confectionery (made with wheat or corn glucose) Glucose polymer Plain potato chips, corn chips, popcorn, taco shells	Muesli bars All snack food containing wheat rye, barley, oats, soy, egg, milk, peanuts and tree nuts All nuts including almonds, brazil nuts, cashews, pistachios, peanuts, chestnuts, macadamia nuts, walnuts, pine nuts Stocks, seasoning with added wheat, soy, nuts, dairy Chocolate Nuts (all) Any nut oil

References

1. Spergel J, M and Shuker M Nutritional Management of Eosinophilic Esophagitis *Gastrointest Endoscopy Clinics N Am* 18 (2008), 179-194

Diet: Maternity Adolescent

Aim: To provide a nutritionally adequate diet for pregnant and breastfeeding adolescents.

Characteristics: All foods need to comply with NSW Food Authority guidelines on food safety in pregnancy and fish offered must comply with FSANZ guidelines on mercury in pregnancy.

Increased energy and nutrient demands of maternity as well as adolescent growth require extra serves and nutrient-dense snacks. Nutritional supplementation of folate, iodine, calcium and iron is required.

A diet that conforms to the *Nutrition standards for paediatric inpatients in NSW hospitals*.

Full serve is appropriate as well as access to extra serves and nutritious snacks to meet increased nutritional demands due to growth needs and additional energy and nutrient demands of maternity.

A wide range of foods from all food groups is included. A wide range of textures is provided.

Nutrition diagnosis:

- NB-3.1 Intake of unsafe food.
- NI-1.1 Hypermetabolism (Increased energy needs)
- NI-5.1 Increased nutrient needs

Indications: Pregnant and breastfeeding adolescents 12-18 years of age.

Nutritional adequacy: Nutritionally adequate provided sufficient food is available to meet the following higher needs for pregnant and breastfeeding women, above that defined for female adolescents in the *Nutrition standards for paediatric inpatients in NSW hospitals*:

Nutrient with higher daily requirements	Pregnancy	Lactation
Energy (kJ)	+1900	+1100
Folate (µg)	+200	+100
Vitamin C (mg)	+5	+40
Iron (mg)	+16*	0
Iodine (mg)	+70	+120
Calcium (mg)	0**	0

* Usually provided with supplements, not food

** No increased needs

Precautions:

Refer to *Paediatric Nutrition standards for minimum menu choice standard* for serve size requirements.

Extra serves and nutritious snacks need to be available to meet appetite and increased needs.

Thoroughly cook all meat, poultry and fish and thoroughly reheat all chilled food.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	Thoroughly cooked meats and eggs Low-mercury fish (eg mackerel, silver warehou, Atlantic salmon, canned salmon and canned tuna in oil, sardines, snapper, trevally, whiting, bream, mullet, garfish) Dishes with added soft cheese (eg spinach and ricotta/fetta) – cooked	<u>For pregnant women only:</u> shark (flake), billfish (broadbill, swordfish, marlin), orange roughy (deep sea perch), catfish
Sauces, Gravies	All	

	ALLOWED	NOT ALLOWED
Starchy Vegetables/ Pasta/Rice	All	
Vegetables	All others	Raw sprouts
Soups	All	
Sandwiches	All breads All other fillings, including pasteurised meats (cooked in bag) and sliced acceptable with correct food hygiene practices, eggs, canned fish, hard cheese	Cold processed meats (eg ham), cold chicken Soft and semi-soft cheese (eg brie, camembert, ricotta), paté
Salads, Dressings	Sanitised vegetables only* Boiled eggs, canned fish, hard cheese Pasteurised meats (cooked in bag) and sliced acceptable with correct food hygiene practices	Raw seafood Cold processed meats (eg ham), cold chicken Soft and semi-soft cheese (eg brie, camembert, ricotta) Sprouts
Breads, Cereals	All	
Spreads	All others	Paté
Hot Breakfast Choices	All	
Fruit	All	
Yoghurt	All	
Desserts	All others	Soft serve icecream
Milk and Cheese	Pasteurised milk Hard cheese (eg cheddar, Swiss) Cottage and soft cheese may be served on the day the packaging is opened	Soft and semi-soft cheese (eg brie, camembert) Unpasteurised dairy products
Beverages	All	
Biscuits	All	
Miscellaneous	Larger serves and more options available if required	Alcohol

* All raw fruit and vegetables must be sanitised as per NSW Food Authority guidelines (see reference 8 – Section 8)

References:

1. Agency for Clinical Innovation. *Food standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
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6. HealthInsite. 2009. *Diet in Pregnancy*. Available at: http://www.healthinsite.gov.au/topics/Diet_and_Pregnancy/
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9. National Health and Medical Research Council. 2006. *Nutrient Reference Values for Australia and New Zealand*. Canberra: Dept Health and Ageing; NHMRC.
10. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics* Blackwell Publishing 3rd Edition
11. National Health and Medical Research Council. Alcohol guidelines. Available at <http://www.nhmrc.gov.au/your-health/alcohol-guidelines> (accessed October 2012).

Diet: Diabetic Paediatric: No set CHO

Aim: To provide a reduced simple carbohydrate (CHO), low *Glycaemic Index*, reduced fat diet with lower saturated and higher poly- and mono-unsaturated fats. The meal plan provides an even and regular intake of carbohydrate containing foods that optimises blood glucose and lipid levels in patients with diabetes. Carbohydrate exchanges are not fixed and thus the meal plan can be individualised according to age, weight, appetite, growth needs, activity and insulin regimen.

Characteristics: Reduced simple carbohydrate, reduced fat diet with lower saturated and higher mono and poly-unsaturated fats. $\leq 30\%$ energy from total fat and $\leq 10\%$ energy from saturated fat. Inclusion of one low *Glycaemic Index* food ($GI \leq 55$) at each meal and snack. Special sugar-free, diabetic foods and artificial sweeteners as sachets are not required. Menu items are labeled to indicate carbohydrate content expressed as exchanges/portions (15g CHO = 1 exchange/portion).

Nutrition diagnosis:

- NI-5.8.4 Inconsistent carbohydrate intake.
- NI-5.8.3. Inappropriate intake of types of carbohydrate
- NI-51.3 Inappropriate intake of food fats

Indications:

- Children and adolescents with diabetes on insulin injection therapy where CHO containing foods need to be eaten regularly and evenly distributed throughout the day.
- Children and adolescents with diabetes on no set exchange pattern. Suitable for children with a new diagnosis of diabetes prior to meal plan development by a dietitian. This may be useful in the initial period after diagnosis when appetite may be larger than usual.
- Children and adolescents with a high diabetes risk.

Nutritional adequacy: Nutritionally adequate

Precautions: Default: Minimum 2 exchanges at meals. Minimum 1 exchange at snacks.

Each individual meal plan is set by the dietitian and needs to be carefully developed, taking into account insulin plan, appetite, feeding pattern and nutrient requirements.

Standardised food servings (as indicated on tray ticket labels) must be adhered to, to prevent post-prandial hyperglycemia or hypoglycemia.

Use of age-appropriate diet will adjust fat content in dairy to provide full fat dairy for children 3 years of age and under.

Education by a clinical dietitian is essential.

The safety of long term use of artificial sweeteners for children is unknown so has been excluded for children under 13 years of age.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All others	Dishes in cream sauces Pies and pastries High fat meats (eg sausages, bacon)
Sauces, Gravies	40mL serve gravies and sauces Cranberry and mint sauces (portion control or single serve only)	White/cream/cheese based sauces, sour cream
Starchy Vegetables/ Pasta/Rice	All without fat or using mono- or polyunsaturated oil (eg mashed and steamed potato, potato baked in allowed oils) Use low GI rice (eg Basmati or Doongara) if possible (<i>See GI website for full list</i>)	Cooked in saturated fat White/cream/cheese based sauces
Vegetables	All others	Served with white cheese sauces Cooked in saturated fat
Soups	All	
Sandwiches	Preferably made with mono- or polyunsaturated margarines Wholegrain/wholemeal breads (preferably grainy low GI breads) are default. White bread may be made available	Butter
Salads, Dressings	All Low joule dressings or made with mono- or polyunsaturated oils	Cream or full fat dressings or mayonnaise
Breads, Cereals	Wholegrain/wholemeal breads (preferably grainy low GI breads) are default. White bread may also be made available Higher fibre breakfast cereals are default (eg rolled oats, muesli, bran cereals, Guardian®, Weet-Bix™) At least 2 low GI cereal choices per breakfast (<i>See GI website for full list</i>)	Highly sugared breakfast cereals (>30% sugar, unless primarily from added fruit) Sweetbreads
Spreads	Jam, Vegemite™, honey, and peanut butter Preferably mono- or polyunsaturated margarines/oils/mayonnaise	Saturated fats (eg butter, shortening, lard, cooking margarine, coconut milk, palm oil)
Hot Breakfast Choices	Boiled, poached or scrambled egg Mushrooms, baked beans, tomatoes	Fried egg, bacon, sausages Hash browns
Fruit	Unsweetened fresh/frozen/canned fruit in natural juice or light syrup. Fruit juices and dried fruit in moderation (≤2 serves per day)	Fruit canned in syrup
Yoghurt	Full fat yoghurt <3 years of age Reduced fat yoghurt from 3 years of age	Reduced fat yoghurt <3 years of age Full fat yoghurt from 3 years of age
Desserts	Icecream maximum 2 serves per week Low fat custards and creamy rice Tapioca, sago	High fat and sugar pastries/pies Sugared jelly

	ALLOWED	NOT ALLOWED
Milk and Cheese	Full dairy <3 years of age Reduced fat dairy from 3 years of age	Reduced fat dairy <3 years of age Full fat dairy from 3 years of age
Beverages	Water, low fat milk, low joule soft drinks/ cordials, plain mineral water Fruit juice maximum 2 serves per day	Regular soft drinks, cordial, flavoured mineral water, tea, coffee, alcoholic drinks
Biscuits	Plain biscuits, Milk Arrowroot™	Cream or chocolate biscuits
Miscellaneous	All herbs and spices, nuts 1 sachet sugar per breakfast tray 1 sachet artificial sugar per breakfast tray (if >13 years)	Sachets of artificial sweetener for children <13 years

References:

1. Agency for Clinical Innovation. *Nutrition standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
5. ISPAD Clinical Practice Consensus Guidelines 2009 Compendium. Nutritional management in children and adolescents with diabetes. *Pediatric Diabetes* 2009; 10(Suppl.12): 100-117
6. Australian Clinical Practice Guidelines on the management of type1 diabetes in children and adolescents APEG. 2005: www.chw.edu.au/prof/services/endocrinology/apeg
7. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics*. Blackwell Publishing 3rd Edition
8. University of Sydney Glycemic Index <http://www.glycemicindex.com/> (accessed March 2012)
9. *Diabetes Australia Glycaemic Index* <http://www.diabetesaustralia.com.au/Living-with-Diabetes/Eating-Well/Glycaemic-Index-GI/> (accessed March 2012)

Diet: Diabetic – CHO in grams (pump diet)

Aim: To provide a diet that optimises blood glucose and lipid levels in patients with diabetes and specifies carbohydrate (CHO) content of items to allow precise insulin dosage. Intake can be individualised meal by meal according to age, weight, appetite, activity and growth needs.

Characteristics: Specified CHO intake.

Reduced simple carbohydrate, low *Glycaemic Index*, reduced fat diet with lower saturated and higher poly-mono-unsaturated fats. 50-60% energy from carbohydrate, $\leq 30\%$ energy from total fat and $\leq 10\%$ energy from saturated fat. Inclusion of one low *Glycaemic Index* food ($GI \leq 55$) at each meal and snack. Special sugar-free, diabetic foods and artificial sweeteners as sachets are not required.

Menu item choices include foods with and without carbohydrate.

Nutrition diagnosis:

- NI-5.8.4 Inconsistent carbohydrate intake.
- NI-5.8.3 Inappropriate intake of types of carbohydrate
- NI-51.3 Inappropriate intake of food fats

Indications: Children and adolescents with diabetes on insulin pump therapy or being initiated on pump therapy where exact CHO content of foods chosen need to be measured and indicated to allow precise insulin dosing.

Nutritional adequacy: Nutritionally adequate.

Precautions: Intake is chosen on menu selection by the patient, as determined by appetite, along with considerations of age, weight, growth needs and usual intake.

Use of and age-appropriate diet will adjust fat content in dairy to provide full fat dairy for children 3 years of age and under. Education and support by a clinical dietitian is essential to ensure effectiveness and for monitoring of diet.

The safety of long term use of artificial sweeteners for children is unknown so has been excluded for children under 13 years of age.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All others	Dishes in cream sauces Pies and pastries High fat meats (eg sausages, bacon)
Sauces, Gravies	40mL serve gravies and sauces Cranberry and mint sauces (portion control or single serve only)	White/cream/cheese based sauces, sour cream
Starchy Vegetables/ Pasta/Rice	All without fat or using mono- or polyunsaturated oil (eg mashed and steamed potato) Use low GI rice (eg Basmati or Doongara) if possible (<i>See GI website for full list</i>)	Cooked in saturated fat White/cream/cheese based sauces
Vegetables	All others	Served with white cheese sauces Cooked in saturated fat
Soups	All	
Sandwiches	Preferably made with mono- or polyunsaturated margarines	Butter

	ALLOWED	NOT ALLOWED
Salads, Dressings	All Low joule dressings or made with mono- or polyunsaturated oils	Cream or full fat dressings or mayonnaise
Breads, Cereals	Wholegrain/wholemeal breads (preferably grainy low GI breads) are default. White bread also may be available Higher fibre breakfast cereals are default (eg rolled oats, muesli, bran cereals, Guardian®, Weet-Bix™) At least 2 low GI cereal choices per breakfast (See GI website for full list)	Highly sugared breakfast cereals (>30% sugar, unless primarily from added fruit) Sweetbreads
Spreads	Jam, Vegemite™, honey, peanut butter Preferably mono- or polyunsaturated margarine/oils/mayonnaise	Saturated fats (eg butter, shortening, lard, cooking margarine, coconut milk, palm oil)
Hot Breakfast Choices	Boiled, poached or scrambled egg Mushrooms, baked beans, tomatoes	Fried egg, bacon, sausages Hash browns
Fruit	Unsweetened fresh/frozen/canned fruit in natural juice or light syrup Fruit juices and dried fruit in moderation (≤2 serves per day)	Fruit canned in syrup
Yoghurt	Full fat yoghurt <3 years of age Reduced fat yoghurt from 3 years of age	Reduced fat yoghurt <3 years of age Full fat yoghurt from 3 years of age
Desserts	Icecream maximum 2 serves per week Low fat custards and creamy rice Tapioca, sago	High fat and sugar pastries/pies Sugared jelly
Milk and Cheese	Full dairy <3 years of age Reduced fat dairy from 3 years of age	Reduced fat dairy <3 years of age Full fat dairy from 3 years of age
Beverages	Water, low fat milk, low joule soft drinks/ cordials, plain mineral water Fruit juice maximum 2 serves per day	Regular soft drinks, cordial, flavoured mineral water, tea, coffee, alcoholic drinks
Biscuits	Plain biscuits, Milk Arrowroot™	Cream or chocolate biscuits
Miscellaneous	All herbs and spices, nuts 1 sachet sugar per breakfast tray 1 sachet artificial sweetener per breakfast tray (for children >13 years)	Sachets of artificial sweetener (for children <13 years)

References:

1. Agency for Clinical Innovation. *Nutrition standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
5. ISPAD Clinical Practice Consensus Guidelines 2009 Compendium Nutritional management in children and adolescents with diabetes *Pediatric Diabetes* 2009; 10(Suppl.12): 100-117
6. Australian Clinical Practice Guidelines on the management of type1 diabetes in children and adolescents *APEG*. 2005: www.chw.edu.au/prof/services/endocrinology/apeg
7. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics*. Blackwell Publishing 3rd Edition
8. University of Sydney Glycemic Index <http://www.glycemicindex.com/> (accessed March 2012)
9. *Diabetes Australia Glycaemic Index* <http://www.diabetesaustralia.com.au/Living-with-Diabetes/Eating-Well/Glycaemic-Index-GI/> (accessed March 2012)

Diet: Cystic Fibrosis (CF)

Aim: To provide a high protein, high energy diet with added salt for children and adolescents with cystic fibrosis (CF). This diet provides approximately 120% protein (average extra 15g per day) and approximately 130% energy of the full diet.

Characteristics: A diet high in protein, high in energy, with added salt and fortification of foods with added fats. Salt is supplemented with high salt foods, as well as serving extra salt sachets with meals.

Extra high-energy snacks are required. Large serves need to be available. Menu items to be fortified with fat (preferably mono- and polyunsaturated) and protein wherever possible.

Apple gel or fruit purees are provided for infants and toddlers requiring pancreatic enzyme replacement therapy administration. High energy nutrient supplements are often used.

Indications: To be used for patients with Cystic Fibrosis.

Nutrition diagnosis:

- NI-1.4 Inadequate energy intake.
- NI-5.9.1 Inadequate mineral intake – Sodium
- NI-1.2 Increased energy expenditure

Nutritional adequacy: Nutritionally adequate.

Precautions: Patients with CF have increased energy expenditure up to twice their basal metabolic rate due to increased ventilation for breathing and impaired absorption and utilisation of nutrients. Appetite may be poor and may not reflect needs for anabolism.

Frequent snacks and availability of choice and extra servings is essential to help meet needs. Frequent dietitian review and provision of high-energy supplements are recommended. The full diet will not provide adequate nutrition for these patients.

Salt supplementation is important to maintain normal hydration.

Not to be combined with diets that restrict fat or sugar.

For patients with cystic fibrosis and diabetes, use the Cystic Fibrosis-related Diabetes

Specific Menu Planning Guidelines

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All, preferably fried, roasted and served with creamy sauces Extra serves to be available Serve with extra oil/PC margarine or butter/ oil in fat dressing	
Sauces, Gravies	All Include gravies, white sauces, cheese sauces	
Starchy Vegetables/ Pasta/Rice	All High energy mashed potato, made on milk and added margarine	
Vegetables	All, with added margarine/oil/high fat dressing	
Soups	All – serve with thin/sour cream Offer one Band 1 choice twice per day	
Sandwiches	All Band 1 providing at least 800kJ per serve and at least 10g protein per serve OR spread with high fat spread (margarine/ cream cheese/mayonnaise)	

This diet specification has been revised.
Please see the Diet Specifications
Nutrition Standards and Diet Specifications
webpage for the revised version

	ALLOWED	NOT ALLOWED
Salads, Dressings	Salads – one Band 1 choice per day containing at least 20g protein, all others to be Band 2 providing at least 10g protein per serve and all served with high fat dressing/mayonnaise	
Breads, Cereals	All bread Serve with extra PC margarine/butter Cereals served with cream and milk	
Spreads	All Send extra PC spread with each meal	
Hot Breakfast Choices	All	
Fruit	With fruits – serve with cream/icecream/custard Offer glucose supplement syrup or powder as prescribed by dietitian Offer whipped/thin cream	
Yoghurt	Full fat yoghurts	Low fat and diet yoghurts
Dessert	Serve milk dessert or high energy dessert at both lunch and dinner Offer one Band 1 choice containing at least 500kJ and at least 4g protein at 2 meals per day	Low joule jelly
Milk and Cheese	Serve all with cream (thin, thick, whipped or double) or cream High protein custards made on milk and skim milk powder/egg All full fat high energy/high protein milk, fortified with skim milk powder Offer milk drink at every meal and midmeal Add cheese to main meals	Low fat milk
Beverages	Full fat milk preferred beverage All others, including soft drink Juice at all meals when available	Diet cordial or soft drink
Biscuits	All, serve crackers with high fat spread	

This diet specification has been revised. Nutrition Standards and Diet Specifications webpage for the revised version

	ALLOWED	NOT ALLOWED
Miscellaneous	<p>Extra snacks and larger serves to be available</p> <p>Extra midmeals to be available – offer one choice per midmeal of Band 1 sandwich or Band 1 dessert among other choices</p> <p>High fat spread PC (margarine/butter) served with every meal</p> <p>Oil/high fat dressings available</p> <p>Cream thin/whipped/sour to be offered with meals</p> <p>2 salt sachets with every meal</p> <p>Nutritional supplements as prescribed by dietitian</p> <p>Fat/glucose supplements and milk powder may be added to foods and beverages and available at all meals</p> <p>Apple gel and fruit purees available at every meal for infants and toddlers requiring pancreatic enzyme therapy</p>	<p>Sugar substitutes</p>

This diet specification has been revised. Please see the Nutrition Standards and Diet Specifications webpage for the revised version

References:

1. Agency for Clinical Innovation. *Nutrition Standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. 2011. *Nutrition Standards for adult inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.clinicalcaremanual.org/> (accessed Dec 2010)
5. Dietitians Association of Australia. 2006. *Australasian Clinical Practice Guidelines for Nutrition in Cystic Fibrosis*. Canberra.
6. Shaw and Lawson (1997) *Clinical Paediatric Dietetics* Blackwell Publishing 3rd Edition
7. Sydney Children's Hospital Network factsheets:
High Energy Eating for Infants http://www.chw.edu.au/parents/factsheets/high_energy_eating_for_infants.htm (accessed 20 May 2011)
High Energy Eating for Children http://www.chw.edu.au/parents/factsheets/high_energy_eating_for_children.htm (accessed 20 May 2011)

Diet: Cystic Fibrosis Related Diabetes

Aim: To provide a diet that supports added nutrition needs while optimising blood glucose levels for children and adolescents with cystic fibrosis related diabetes. Contains additional energy from fats and protein and additional salt for children and adolescents with cystic fibrosis, while allowing individualised approach to carbohydrate intake. This diet provides approximately 120% protein (average extra 15g per day) and approximately 130% energy of the full diet.

Characteristics: Total carbohydrate intake and distribution is not controlled. Artificially sweetened products and regular sugar products are available to allow individual selection. All meals and mid-meals should include menu options that contain CHO. Include foods with a low *Glycaemic Index*. Provides additional extra foods, salt, protein, added fats and complex CHO. Extra fats (preferably mono- and polyunsaturated) are relied on to meet energy requirements.

Salt supplemented with high salt foods, as well as serving extra salt sachets with meals.

Individual nutrition planning and frequent dietitian review is required. Patients may vary widely in need for CHO regulation.

Nutrition diagnosis:

- NI-5.8.1 Inconsistent carbohydrate intake.
- NI-1.4 Inadequate energy intake.
- NI-5.9.1 Inadequate mineral intake – Sodium
- NI-1.2 Increased energy expenditure

Indications: For children with cystic fibrosis related diabetes who need carbohydrate regulation as well as extra energy sources and salt supplementation.

Nutritional adequacy: Nutritionally adequate. Note: Very high requirements for energy may make it difficult to meet requirements.

Precautions: Low-joule products are not permitted.

Patients with cystic fibrosis have increased energy expenditure up to 2x basal metabolic rate due to increased work of breathing and impaired absorption and utilisation of nutrients. Appetite may be poor and may not reflect needs for metabolism. Frequent snacks and availability of choice and energy servings is essential to help meet needs. Frequent dietitian review and provision of high-energy supplements are recommended. Due to the restriction of simple sugars on this diet, fat intake needs to be increased to meet energy needs.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All, deep-fried, roasted and served with extra fat/sauces Extra serves to be available Serve with extra oil/PC margarine or butter/ high fat dressing	
Sauces, Gravies	All Include gravies, white sauces, cheese sauces	
Starchy Vegetables/ Pasta/Rice	All High energy mashed potato, made on milk and added margarine	
Vegetables	All, with added margarine/oil/high fat dressing	
Soups	All, serve with thin/sour cream Offer one Band 1 choice twice per day	

	ALLOWED	NOT ALLOWED
Sandwiches	All Band 1 providing at least 800kJ per serve and at least 10g protein per serve OR spread with high fat spread (margarine/cream cheese/mayonnaise)	
Salads, Dressings	1 x Band 1 salad per day containing at least 20g protein, all others to be Band 2 providing at least 10g protein per serve and all served with high fat dressing/mayonnaise	
Breads, Cereals	All bread Serve with extra PC margarine/butter Cereals served with cream	
Spreads	All Send extra PC spread with each meal	
Hot Breakfast Choices	All	
Fruit	With fruits – serve with cream (thin, thick, whipped or double) or icecream or custard	
Yoghurt	Full fat yoghurts	Low fat and diet yoghurt
Desserts	Serve milk-dessert or high energy dessert at both lunch and dinner Offer one Band 1 dessert containing at least 500kJ and at least 4g protein per 2 meals per day Serve all with cream (thin, thick, whipped or double) or ice cream High-protein custards made with milk and skim milk powder/egg	Regular sugar and jelly and low joule jelly
Milk and Cheese	All full fat, high energy/high protein milk, fortified with skim milk powder Offer milk daily at every meal and midmeal Add cheese to main meals	Low fat milk
Beverages	Milk preferred beverage All others Moderate amounts (<2 serves per day) of fruit juice only Regular and low joule soft drinks Regular and low joule cordials	
Biscuits	All, serve crackers with high fat spread	

**This diet specification has been revised.
Please see the Nutrition Standards and Diet Specifications webpage for the revised version**

	ALLOWED	NOT ALLOWED
Miscellaneous	<p>Extra snacks and larger serves to be available</p> <p>Extra midmeals to be available – offer one choice per midmeal of Band 1 sandwich or Band 1 dessert among other choices</p> <p>High fat spread PC (margarine/butter) served with every meal</p> <p>Oil/high fat dressings available</p> <p>Cream thin, whipped/sour to be offered with meals</p> <p>2 salt sachets with every meal</p> <p>Nutritional supplements as prescribed by dietitian</p> <p>Fat supplements may be added to foods and beverages</p> <p>Apple gel and fruit purees available at every meal for infants and toddlers requiring pancreatic enzyme therapy</p>	<p>Sugar substitutes</p>

This diet specification has been revised. Nutrition Standards and Diet Specifications webpage for the revised version

References:

1. Agency for Clinical Innovation. *Nutrition Standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed.* Adelaide: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
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6. Dietitians Association of Australia. 2006. *Australasian Clinical Practice Guidelines for Nutrition in Cystic Fibrosis*. Canberra.
7. Sydney Children's Hospital Network factsheets:
http://www.chw.edu.au/parents/factsheets/high_energy_eating_for_infants.htm (accessed 20 May 2011)
http://www.chw.edu.au/parents/factsheets/high_energy_eating_for_children.htm (accessed 20 May 2011)
8. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics*. Blackwell Publishing 3rd Edition

Diet: Energy – High Paediatric

Aim: To provide a diet containing approximately 120% energy than can be achieved on the Full diet alone.

Characteristics: Full diet plus addition of added fats, carbohydrate, and protein to foods; availability of extra foods, extra serves and extra mid-meals. Nutritional supplements may be used. Often combined with a high-protein diet.

Typical default mid-meals:

AM: Half sandwich with protein-containing filling+ full fat milk + extra as desired

PM: Cheese and biscuits + full fat milk + extras as desired

Supper: Full fat milk + cake/muffin + extras as desired

Indications: To be used for patients requiring above normal energy intake.

- Failure to thrive
- Inability to eat sufficient volume (eg Disability, may be combined with texture modified)
- Oncology
- Burns
- Respiratory conditions
- Congenital cardiac anomalies
- Unintentional weight loss or decreased food intake
- In combination with other therapeutic diets which may result in a reduced energy intake (eg low protein)

For Cystic Fibrosis, see separate CF diets.

Nutrition diagnosis:

- NI-1.4 Inadequate energy intake.
- NI-1.2 Increased energy expenditure
- NI-1.1 Hypermetabolism
- NI-2.1 Inadequate oral food/beverage intake
- NI-5.1 Increased nutrient needs
- NI-5.2 Evident protein-energy malnutrition
- NI-5.3 Inadequate protein-energy intake
- NI-5.6.1 Inadequate fat intake
- NC-2.1 Impaired nutrient utilization
- NC-3.1 Underweight
- NC-3.2 Involuntary weight loss

Nutritional adequacy: Nutritionally adequate.

Precautions: Dietitians may need to consider ordering high-energy nutritional supplements. An additional protein source (eg a boiled egg) may be offered at a main meal for people with high protein requirements.

Not to be combined with diets that restrict fat or sugar.

May be combined with high protein diet.

Not to be used for anorexia nervosa or other eating disorders in paediatrics.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All Extra serves to be available Serve with extra oil/PC margarine or butter/ high fat dressing	
Sauces, Gravies	All Include white sauces, cheese sauces	
Starchy Vegetables/ Pasta/Rice	All High energy mashed potato made on milk and margarine	
Vegetables	All, with added margarine	
Soups	All to be Band 1 with at least 360kJ/serve or served with thin cream/sour cream/margarine	
Sandwiches	All Band 1 providing at least 800kJ/serve and at least 10g protein/serve or spread with high fat spread (margarine/cream cheese/mayonnaise)	

	ALLOWED	NOT ALLOWED
Salads, Dressings	Salads – one Band 1 choice per day containing at least 20g protein, all others to be Band 2 providing at least 10g protein per serve and served with high fat dressing	Low fat dressings
Breads, Cereals	All bread Serve with extra spread PC Cereals served with cream	
Spreads	All Send extra 1 portion control spread with each meal	
Hot Breakfast Choices	All	
Fruit	Canned fruit in syrup + glucose/dextrose polymer available at all meals Serve all with custard, yoghurt, cream, icecream	
Yoghurt	Full fat yoghurts	Low fat and diet yoghurt
Desserts	All others Offer one Band 1 choice dessert containing at least 500kJ and at least 4g protein at 2 meals per day Serve all with cream (thin, thick or double) or icecream	Fruit or jelly served without milk dessert, icecream or cream
Milk and Cheese	All full fat	
Beverages	All others	Low joule cordial, low joule soft drink
Biscuits	All, serve crackers with high fat spread	
Miscellaneous	Extra serves and larger serves to be available Extra midmeals to be available – offer one choice per midmeal of Band 1 sandwich or Band 1 dessert among other choices Fat/glucose supplements may be added to foods and beverages Nutritional supplements as prescribed by dietitian Sugar	Sachets of artificial sweetener

References:

1. Agency for Clinical Innovation. *Nutrition standards for paediatric inpatients in NSW hospitals*. Sydney 2011. Available at <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
2. Agency for Clinical Innovation. *Nutrition Standards for Adult Inpatients in NSW Hospitals*. Sydney 2011. Available at: <http://www.aci.health.nsw.gov.au/publications#nutrition> (accessed March 2012).
3. Dietitians Association of Australia. 2009. *Nutrition Manual 8th ed*. Canberra: DAA.
4. American Dietetic Association. *Paediatric Nutrition Care Manual*. Chicago: ADA. Available at <http://www.nutritioncaremanual.org/> (accessed Dec 2010)
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High Energy Eating for Children http://www.chw.edu.au/parents/factsheets/high_energy_eating_for_children.htm (accessed 20 May 2011)
6. Shaw V and Lawson M. 2007 *Clinical Paediatric Dietetics*. Blackwell Publishing 3rd Edition

Diet: Energy – Low Weight Management Paediatric

Aim: To provide an energy-controlled diet with a wide variety of foods that will allow steady weight loss or prevent weight gain in low activity patients. For children over the age of 2 years only.

Characteristics: Foods should be low or reduced fat, low energy and may include artificial sweeteners. Low Glycemic Index (GI) foods should be included in every meal.

Target energy will depend on individual dietetic assessment and age of child as determined by the on-site clinical dietitian.

Aim for the following macronutrient distribution:

Carbohydrate: 45-50%E; Fat: <30%E (<10% energy from saturated fat); Protein: 20%E

A structured mealplan is recommended, to be planned by the dietitian according to patients’ individual needs. Intake should be regular and spread evenly through the day in appropriate serve sizes.

Midmeals to contain 1 serve protein containing food. Examples include:

- low fat cheese
- reduced fat yoghurt
- ½ lean meat sandwich with poly- or monounsaturated spread
- low fat milk

Nutrition diagnosis:

- NI-1.5 Excessive energy intake.
- NI-1.3 Hypometabolism (Decreased energy needs)

Indications: For patients requiring a low energy diet for:

- Overweight and obesity
- Low activity patients (eg spinal injury)
- Increased appetite due to medications (eg Mental health patients)

Nutritional adequacy: Nutritionally adequate.

Precautions: Dietitians may manipulate diet selections to individualise total energy prescription. Note this diet is not suitable for children under 2 years of age.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	Main dishes ≤30% energy from total fat and ≤10% energy from saturated fat Lean meat, skinless chicken, fish, eggs Soy products (eg tofu, TVP) Cooked legumes	Fried foods and dishes in cream sauces High fat meats (eg sausages, bacon) Pies and pastries
Sauces, Gravies	Vinegar, tomato sauce, small serve low fat gravy	White sauces, sour cream
Starchy Vegetables/ Pasta/Rice	All without added fat or <1g fat per serve Small amounts of mono- or polyunsaturated oil (eg mashed and steamed potato, sweet potato) Use low GI rice (eg Basmati or Doongara) if possible (See GI website for full list) Single serves of pasta, rice, noodles	Fried and chipped potatoes Fried rice
Vegetables	All without added fat Steamed/boiled in water, stewed/baked without using fat	Fried, or served with margarine or white/cheese sauces

	ALLOWED	NOT ALLOWED
Soups	All with <2 g fat per serve (eg clear and low fat soups) Clear, vegetable and low fat soups	Cream soups
Sandwiches	All with <8g fat per serve Salad vegetables/cottage cheese/ricotta Tuna/lean meats/egg white Wholemeal/wholegrain (low GI varieties) bread default Spreads to be mono- or polyunsaturated margarines (max 1 portion per 2 slices of bread)	Peanut butter, cheese High fat meats, salmon
Salads, Dressings	<2g fat per serve Low fat or low joule dressing	Cream, mayonnaise or full fat dressing
Breads, Cereals	All breads, preferably wholemeal/wholegrain (low GI varieties) Rolled oats made on water Higher fibre breakfast cereals only (eg rolled oats, muesli, bran cereals, Guardian®, Weet-Bix™). At least 2 low GI cereal choices per breakfast (See GI website for full list)	Highly sugared breakfast cereals (>30% sugar, unless primarily from added fruit) Sweet breads
Spreads	Mono- or polyunsaturated margarine (max 1 portion per 2 slices) Honey, jam, Vegemite™, peanut butter (portion controlled/slice)	Saturated fats (eg butter, shortening, lard, cooking margarine, coconut milk, palm oil)
Hot Breakfast Choices	Baked beans, spaghetti, mushrooms, boiled/poached egg, scrambled egg using low fat milk	Fried egg, bacon, sausages Hash browns
Fruit	All fresh and canned fruit in juice/water	Dried fruit, fruit canned in syrup Juice
Yoghurt	Low fat and diet yoghurts	Full-fat yoghurt
Desserts	All with <2 g fat per serve Low-fat dairy desserts, low-joule jelly Low fat icecream (maximum 2 times per week)	Cakes and pastries, sugared jelly, cream Full-fat icecream and toppings
Milk and Cheese	All reduced fat dairy Low fat milk Ricotta or cottage cheese	Full fat milk Hard cheese
Beverages	Water Reduced fat milk Reduced fat soy beverage Low joule cordial or soft drinks	Full fat or flavoured milk Cordial, soft drink Juice
Biscuits	<2g fat per serve Corn, rice cakes, crackers, wafers	All others

	ALLOWED	NOT ALLOWED
Miscellaneous	Lemon wedge All midmeals to contain at least 1 protein containing food 1 sachet artificial sweetener per meal for children >13 years	Sugar sachet Artificial sweetener sachets for children <13 years of age Nuts, chocolate, chips

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Diet: Fat – Minimal Total Paediatric

Aim: To provide a diet with no more than 10g total fat per day, for patients with metabolic disorders affecting fat utilisation, or for patients who do not tolerate addition of medium chain triglyceride (MCT) fat in the minimal long chain fat plus MCT diet.

Characteristics: Very low in total fat. Skim dairy foods and very lean meats are used. Fat is not used in cooking or food preparation. Requires additional energy supplements from CHO or protein (if appropriate). May need to be combined with a minimal or reduced protein diet for some metabolic disorders.

Indications: For patients with metabolic disorders affecting fat utilisation such as MADD (glutaric aciduria type 2), HMGA Co lyase deficiency, or other disorders of fatty acid oxidation in which tolerance to MCT is a problem or unknown or for patients with pancreatitis.

Nutrition diagnosis:

- NI-5.6.2 Excessive fat intake.
- NC-2.1 Impaired Nutrient Utilisation

Nutritional adequacy: Nutritionally inadequate.

This diet may not provide adequate energy and intake of fat soluble vitamins. Essential fatty acids may be compromised and should be assessed by a dietitian. Appropriate nutritional supplements (such as glucose polymers, clear high protein supplement drinks) will be required to meet the patient's energy and/or nutrient needs. Adequate energy intake and avoidance of fasting is essential in the management of inborn errors of fatty acid oxidation to prevent hypoglycaemia. Adequate amounts of essential fatty acids must be provided to prevent deficiency, usually requiring supplementation with very long chain omega 3 fatty acid docosahexaenoic acid (DHA). Supplementation with fat soluble vitamins (A, D, E) may also be required.

Precautions: *Must only be used when ordered by a physician and under the supervision of a dietitian.* Adequate energy intake is essential. Fat-soluble vitamins and essential fatty acid status should be supplemented and monitored regularly as patients may be vulnerable to deficiency, eg Vitamin D, E, A, DHA. Assessment and menu planning by a dietitian is essential. Should not be used long term without dietetic advice and regular follow-up.

Patients with pancreatitis should not continue on this diet for more than one week.

Patients with LCHAD deficiency, VLCHAD deficiency, TFP deficiency, chyle leaks/chylothorax, should use minimal long chain fat plus MCT diet code to ensure sufficient energy provision to meet requirements.

For patients with metabolic disorders involving fat and also protein, this diet can be combined with the Metabolic Minimal Protein diet.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<p>All mains to be <5g total fat per serve (eg skinless chicken breast, white fish, very lean meat, tuna canned in brine)</p> <p>Soy products (eg TVP), legumes and dishes made from them</p> <p>Egg whites only</p>	<p>All other meats including fatty meats and smallgoods (eg bacon, sausages)</p> <p>Offal</p> <p>Fried foods, including foods fried in MCT oil</p> <p>Foods cooked with white sauces or coconut milk</p> <p>Egg yolks</p> <p>Pastry, pizza</p> <p>Dishes containing cheese</p> <p>MCT oil</p>
Sauces, Gravies	<p>Low fat sauces/gravies <1g long chain fat per serve</p> <p>Tomato sauce, sweet and sour sauce</p>	<p>Cream- or milk-based sauces</p> <p>Sauces, gravies with MCT oil</p>

	ALLOWED	NOT ALLOWED
Starchy Vegetables/ Pasta/Rice	All raw, steamed or boiled Potato mashed with water or skim milk	Fried/roasted/mashed vegetables with fat such as butter, cooking margarine, oil, cheese sauce MCT oil, sour cream, full cream milk, cheese
Vegetables	All raw, steamed or boiled without added fat	Fried/roasted/mashed vegetables with fat such as butter, cooking margarine, oil, MCT oil, sour cream, full cream milk, cheese Vegetables served with cream- or cheese-based sauces
Soups	Low fat soups only with <2g fat per serve Add 20mL glucose polymer syrup or 10g of glucose powder	All other soups including with added milk, cream, sour cream, coconut milk or cream
Sandwiches	<5g fat per serve Bread (white or wholemeal) with no standard margarine or butter Vegemite™, jam, honey Salad fillings Sliced chicken breast cooked without fat or skin Deli meat <3% fat Tuna canned in brine Egg white Cheese <3% fat (eg some very low fat cheese slices, cottage cheese, ricotta cheese)	Most cheese, higher fat meat fillings, egg yolk, peanut butter Avocado, olives Margarine, butter, cream cheese, mayonnaise Spread Paté
Salads, Dressings	<5g fat per serve as main meal Salads containing lean meat, chicken breast, white fish, tuna canned in brine, low fat cheese with <3% fat Side salad vegetables Served with fat-free dressing or lemon wedge	Other cheese, higher fat meats Coleslaw or potato salad Full fat dressings, mayonnaise Olives, avocado
Breads, Cereals	Breads, breakfast cereals, rice cakes, corn thins with <2% fat Rolled oats made on water or skim milk Raw muesli of rolled oats and dried fruit Serve with skim milk	Toasted muesli Raw muesli with nuts or seeds Rolled oats made with full cream milk Cereals with coconut
Spreads	Jam, honey, Vegemite™	Butter, margarine Peanut butter, cream cheese, hazelnut spread
Hot Breakfast Choices	Spaghetti, baked beans (<2% fat) Egg white only Grilled plain or herbed tomato	Bacon, sausages, egg yolk
Fruit	Fresh/canned in syrup/dried fruits Serve with 20mL glucose polymer syrup (see recipe below) or 10g glucose powder Juices with added glucose polymer	Avocado
Yoghurt	Fat-free (skim milk) yoghurts (<1% fat)	Full fat or soy yoghurts

	ALLOWED	NOT ALLOWED
Desserts	Canned and fresh fruit Jelly Meringue, pavlova Desserts made using egg white (<1% fat) Low fat custard and skim milk dessert (<1% fat) If <700kJ/serve with 20mL glucose polymer	Cake, pastries, puddings Dairy/milk based desserts Desserts containing egg yolk Cream, icecream
Milk and Cheese	Skim milk, Shape™ or milk with <1% fat Soy beverage with <1% fat Cottage cheese, ricotta cheese, some very low fat cheese slices (<3% fat)	Milk >1% fat (eg full-cream milks, reduced fat milks) Soy beverage with >1% fat Cream, sour cream All other cheeses
Beverages	Water Cordials, juices, soft drinks Skim milk or milk with <1% fat Low fat nutritional supplements – prescribed by dietitian Energy content of drinks to be fortified to 4.2kJ/mL with glucose polymer	Milk >1% fat
Biscuits	<2 g fat per serve Fat-free only (eg rice crackers)	All others
Miscellaneous	Herbs and spices Sugar Lollies (eg boiled lollies, jelly snakes) Iceblocks Glucose polymers	Nuts and seeds Chocolate

9kJ/mL Glucose polymer syrup recipe:

56g glucose polymer added to 60mL water (makes 100mL)

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Diet: Fat – Low Saturated Paediatric

Aim: To provide a low saturated fat intake.

Characteristics: Reduced saturated fat and trans fatty acids. mono- and polyunsaturated fats and oils needs to be higher to reach standard energy needs. For cholesterol-lowering diets, the intakes of soluble dietary fibre, omega-3 fatty acids, soy and nuts are increased, and foods high in salt are minimised. Simple sugars are reduced.

Desired composition:

Saturated Fat: <7% total energy

Total fat: 30% total energy

Nutrition diagnosis: NI-5.6.3 Inappropriate intake of fats.

Indications: Patients with familial hyperlipidaemia

Nutritional adequacy: Nutritionally adequate.

Precautions: Note that mono-and polyunsaturated fats and oils need to be added to the diet to ensure adequate energy intake and beneficial ratio saturated: unsaturated fats. Plant sterol margarine is not recommended for children.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	Main dishes ≤5g saturated fat per serve Lean meat, skinless chicken, fish, eggs Fish encouraged Soy products (eg TVP) Legumes and beans	Fatty meats (eg bacon, sausages) Fat on meat Skin on chicken Offal Deep fried foods Foods cooked in coconut milk
Sauces, Gravies	Low fat sauces and gravies	Cream-based sauces
Starchy Vegetables/ Pasta/Rice	All raw, steamed or boiled Dressing of mono- or polyunsaturated oil Roasted in mono- or polyunsaturated oil	Fried/roasted vegetables with saturated fat such as butter, cooking margarine, palm oil or dripping Noodles high in fat
Vegetables	All raw, steamed or boiled Dressing of mono- or polyunsaturated oil Roasted in mono- or polyunsaturated oil Offer legumes/baked beans	Fried/roasted vegetables with saturated fat such as butter, cooking margarine, palm oil or dripping Vegetables served with cream- or cheese-based sauces
Soups	Low-fat soups (≤1.5g saturated fat per serve)	Soups made with cream or full-fat milk or coconut milk
Sandwiches	≤ 5g saturated fat per serve Made with mono- or polyunsaturated margarines	Butter Cheese High fat processed meats such as salami, devon, chicken loaf
Salads, Dressings	≤ 5g saturated fat per serve Mayonnaise and dressings made with mono- or polyunsaturated fats	Cream dressings
Breads, Cereals	Wholegrain and wholemeal varieties preferred Rolled oats made on water or reduced fat milk	Commercial pastries, cakes and biscuits made with butter or partially hydrogenated oils

	ALLOWED	NOT ALLOWED
Spreads	Mono- or polyunsaturated margarines Vegetemite™, peanut butter	Butter Margarines high in plant sterols and stanols
Hot Breakfast Choices	Boiled and scrambled eggs Mushrooms, baked beans, tomatoes	Fried eggs Bacon Hash browns
Fruit	Fresh/canned/dried fruits Juice (limit to 200mL per day) Avocado	Fruit cakes or pastries made with butter or partially hydrogenated oils
Yoghurt	Low fat yoghurts	Full-cream yoghurts
Desserts	Dessert with ≤1.5g saturated fat per serve Low fat icecream, custards and creamy rice Tapioca, sago	Full-fat icecream or custards Commercial cakes Cream
Milk and Cheese	Low fat milk, skim milk Soy milk Low fat cottage cheese/ricotta	Full-cream milks Cream, sour cream Full-fat cheese (eg cheddar)
Beverages	Water Diet cordials (limit) Juice (limit to 200mL per day)	Full-fat milk
Biscuits	Plain low fat biscuits with ≤ 2g saturated fat per serve (eg Granita™, Shredded Wheatmeal™, Milk Coffee™, Milk Arrowroot™, water crackers, rice/corn cakes, crackers) Mono- or polyunsaturated spread on crackers as appropriate	Commercial biscuits made with butter or partially hydrogenated oils
Miscellaneous	Unsalted nuts (eg almonds, hazelnuts, cashews, pecans, pine nuts, pistachios) and seeds Herbs and spices	Salted peanuts and seeds Chocolate Plant sterols and stanols

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Diet: Fat – Minimal long chain triglycerides (LCT) plus medium chain triglycerides (MCT)

Aim: To provide a diet low in long chain triglycerides and high in medium chain triglycerides to bypass lymphatic chylomicron transport and decrease lymph flow or for the management of inborn errors of fatty acid oxidation.

Characteristics: Low fat diet supplemented with MCT oil (medium chain triglycerides). Lean meat, dairy products. MCT oil obtained on prescription needs to be incorporated into food prior to service (ie. added to foods as dressings/sauces; added to beverages). MCT can also be used in baking or shallow frying to boost energy intake. MCT butter may be used to substitute other spreads. Sugars or glucose polymers may be used to add extra energy.

Nutrition diagnosis:

- NI-4.2 Excessive bioactive substance intake
- NI-5.6.3 Inappropriate intake of fats

Indications:

- Post chylothorax
- Chyluria
- Lymphangiectasia
- Inborn errors of long chain fatty acid oxidation such as long chain 3-hydroxyacyl-CoA dehydrogenase deficiency (LCHAD), Trifunctional protein deficiency (TFPD), Very long chain acyl-CoA dehydrogenase deficiency (VLCAD), Carnitine/acylcarnitine translocase deficiency (CACT), Carnitine palmitoyl transferase deficiency (CPT)

Nutritional adequacy: This diet may not provide adequate energy and intake of fat soluble vitamins. Essential fatty acids may be compromised and should be assessed by a dietitian. Nutritional supplements and/or high MCT formulas may be required to meet the patient’s energy and/or nutrient needs. Adequate energy intake and avoidance of fasting is essential in the management of inborn errors of long chain fatty acid oxidation to prevent hypoglycaemia. Adequate amounts of essential fatty acids must be provided to prevent deficiency, usually requiring supplementation with very long chain omega 3 fatty acid docosahexaenoic acid (DHA). Supplementation with fat soluble vitamins (A, D, E) may also be required.

Precautions: *To be initiated on physician’s advice only and to be used under supervision of a Dietitian.* Weight and growth must be monitored regularly. Patients need an authority prescription to obtain MCT oil or high MCT formulas. Advice on how to use in preparation and recipes for use need to be provided. Adequate amounts of essential fatty acids must be provided to prevent deficiency. Monitor progress regularly and re-introduce a normal diet as soon as possible as indicated by medical team.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All mains to be <6g long chain fat per serve (eg skinless chicken breast, white fish, very lean meat, tuna canned in brine) Soy products (eg TVP), legumes and dishes made from them Egg whites only MCT could be used for shallow/pan frying OR add 10mL MCT oil or equivalent MCT supplement serve to hot main dishes or sauces/gravies to be served with the hot main dish	All other meats including fatty meats and smallgoods (eg bacon, sausages, offal) Fried foods, unless fried in MCT oil Foods cooked with white sauces or coconut milk Egg yolks Pastry, pizza Dishes containing cheese
Sauces, Gravies	Low fat sauces/gravies <1g long chain fat per serve Tomato sauce, sweet and sour sauce Make sauces/gravy with MCT oil OR add 10mL MCT oil or equivalent MCT supplement to meal before serving	Cream- or milk-based sauces

	ALLOWED	NOT ALLOWED
Starchy Vegetables/ Pasta/Rice	All raw, steamed or boiled Potato mashed with water or skim milk and MCT oil	Fried/roasted/mashed vegetables with fat such as butter, cooking margarine, oil, sour cream, full cream milk, cheese
Vegetables	All raw, steamed or boiled without added fat	Fried/roasted/mashed vegetables with fat such as butter, cooking margarine, oil, sour cream, full cream milk, cheese Vegetables served with cream- or cheese-based sauces
Soups	Low fat soups only with <2g fat per serve	All other soups including with added milk, cream, sour cream, coconut milk
Sandwiches	<5g fat per serve Bread (white or wholemeal) with no standard margarine or butter. Can use MCT butter (<i>see recipe below</i>) Vegemite™, jam, honey Salad fillings Sliced chicken breast cooked without fat Deli meat <3% fat, tuna canned in brine Egg white Cheese <3% fat (eg cheese slices with <3% fat, cottage cheese, ricotta cheese)	Cheese >3% fat, higher fat meat fillings, egg yolk, peanut butter Avocado, olives Margarine, butter, cream cheese, mayonnaise
Salads, Dressings	<5g fat per serve as main meal Salads containing lean meat, chicken breast, white fish, tuna canned in brine, low fat cheese <3% fat Side salad vegetables Served with fat-free dressing or lemon wedge OR 10mL MCT oil dressing	Other cheese, higher fat meats Coleslaw or potato salad Full fat dressings; mayonnaise Olives, avocado
Breads, Cereals	Breads, breakfast cereals, rice cakes, corn thins with <2% fat Rolled oats made on water or skim milk Raw muesli of rolled oats and dried fruit	Toasted muesli Raw muesli with nuts or seeds Rolled oats made with full cream milk Cereals with coconut or chocolate
Spreads	Jam, honey, Vegemite™, MCT butter (<i>see recipe below</i>)	Butter, margarine Peanut butter, cream cheese, hazelnut spread
Hot Breakfast Choices	Spaghetti, baked beans <2% fat, grilled plain or herbed tomatoes Egg white only	Bacon, sausages, egg yolk
Fruit	Fresh/canned/dried fruits Juices	Avocado
Yoghurt	Fat-free (skim milk) yoghurts <1% fat	Full-fat or soy yoghurts
Desserts	Canned and fresh fruit, jelly Meringue, pavlova (meringue only) Desserts made using egg white <1% fat Low fat custard and skim milk dessert <1% fat	Cake, pastries, puddings Dairy/milk based desserts Desserts containing egg yolk Cream, icecream

	ALLOWED	NOT ALLOWED
Milk and Cheese	Skim milk, Shape™, milk with <1% fat Soy beverage with <1% fat Recipe for MCT special skim milk (see below) Cottage cheese, ricotta cheese, some very low fat cheese slices (<3% fat)	Milk with >1% fat, (eg full-cream milks) Soy beverage with >1% fat Cream, sour cream All other cheeses
Beverages	Water Cordials, juices, soft drinks Skim milk, Shape™, milk with <1% fat Soy beverage with <1% fat High MCT formula/nutritional supplements as prescribed by dietitian	Milk with >1% fat Soy beverage with >1% fat
Biscuits	<2 g fat per serve Fat-free only (eg rice crackers) Biscuits using MCT oil as fat source Spread crackers with MCT butter if appropriate	All others
Miscellaneous	Herbs and spices Sugar Lollies (eg boiled lollies, jelly snakes) Iceblocks MCT oil/supplement may be prescribed MCT oil/supplement can be added to gravy, dressings, casseroles, etc Glucose polymers	Nuts and seeds Chocolate

Recipe for MCT butter

1 tablespoon cornflour
¾ cup skim milk powder
1 tablespoon lemon juice
¾ cup water
1 cup MCT oil
few drops yellow food colouring

Method:

Mix dry ingredients with lemon juice and water in a blender
Cook over gentle heat until thickens
Remove from heat and gradually beat in MCT oil
Add yellow colouring
Will keep for 2 weeks in the fridge

Recipe for MCT Special Skim Milk

600mL skim milk
60g skim milk powder
1 tablespoon MCT oil
6 tablespoon glucose polymer powder

Method:

Mix all ingredients together well

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Diet: Ketogenic Classic & Modified MCT

Aim: To provide a very high fat, very low carbohydrate (CHO) diet that is adequate in protein to assist in the management of seizures.

Characteristics: Very high fat, very low CHO diet that drives the body to produce ketones. CHO free fluids and low joule drinks are permitted. Protein is controlled at a level that is sufficient for growth, as determined by dietetic review. Ketogenic nutritional supplement may be given as a milk substitute or meal replacement. Each diet must be calculated and individualised for each patient. The diet may be started at 50% calories and increased gradually or may be introduced by a gradual increase in the percentage of energy provided by fat with a corresponding decrease in energy provided by CHO and protein. MCT oil fat supplement is given with every meal on the MCT ketogenic diet according to dietitian prescription.

Diet Type	% Energy from Fat	% Energy from Protein	% Energy from CHO
Classic	90%	5-7%	3-5%
Modified MCT	40% MCT 40% LCT	As requirements	Approx 10%

Nutrition diagnosis: Not Applicable

Indications: Used to help control refractory epilepsy

Nutritional adequacy: Can be nutritionally adequate with the inclusion of a ketogenic nutrition supplement

Precautions: *Must only be initiated by a Neurologist and an experienced clinical dietitian.* Must be planned individually with regards to protein, carbohydrate and fat requirements in accordance with medical therapy. It must be managed by an on-site clinical dietitian on a meal by meal basis. Any change to nutrient composition or menu substitutions may directly affect seizure control and medication requirements. Facility must be provided for meals to be prepared and plated in an on-site kitchen according to the clinical dietitian's instruction.

Important aspects to preparing the ketogenic diet:

- 1) Prepare only the ingredients/foods that are specified in each menu
- 2) All ingredients/foods must be supplied and no substitutions are allowed
- 3) Weigh & check all foods precisely
- 4) Use a spatula to clean all fat ingredients from the cooking dish onto the plate.

Assessment and frequent review by a clinical dietitian is essential for all patients on this diet. Ongoing follow-up and comprehensive education of the patient and their family onto the Ketogenic diet is vital and must be ensured before starting the diet. Serve sizes of fat, CHO and protein must be determined by the clinical dietitian. All items on meal tray must be individually weighed prior to plating and double checked by a dietary assistant or equivalent trained personnel. All items served must be eaten by patient and any wastage monitored and reported to dietitian and medical team.

Ongoing medical & clinical dietetic review and support is essential for patient safety.

Specific Menu Planning Guidelines: (The clinical dietitian may override these guidelines at their discretion)

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All. High fat preferable, such as fried and roast meats; creamy sauces. Protein and CHO content must be controlled, defined by individual requirements	None
Sauces, Gravies	All. Extra serves available. CHO content must be counted	None
Starchy Vegetables/ Pasta/Rice	All. CHO content must be counted	None
Vegetables	Maximum $\frac{3}{4}$ cup per meal total of "free" vegetables: alfalfa, asparagus, beans, bok choy, broccoli, brussels sprouts, cabbage, capsicum, carrot, cauliflower, celery, cucumber, eggplant, leek, lettuce, mushrooms, onion, silverbeet, spinach, sprouts, squash, snow peas, tomato, zucchini, avocado (fat content must be counted) All other veg allowed, but CHO must be counted Serve with butter/margarine/cream/oil preferably	None
Soups	All. Serve with cream/sour cream preferably CHO content must be counted	None
Sandwiches	May request partial serves (eg $\frac{1}{4}$) All. High fat spreads and fillings preferable CHO content must be counted	None
Salads, Dressings	Vinegar, oils, mayonnaise All full fat salad dressings Maximum $\frac{3}{4}$ cup free vegetables	Low fat salad dressing (containing sugar)
Breads, Cereals	All. CHO controlled	
Spreads	Butter, margarine, Vegemite™, peanut butter Extra serves butter/margarine available	Jam, honey
Hot Breakfast Choices	All. CHO content must be counted	None
Fruit	Fresh fruit, canned fruit drained, or in water CHO content must be counted	Canned fruit in syrup, dried fruit
Yoghurt	Full fat yoghurt	Reduced fat yoghurt
Desserts	Diet jelly, full fat icecream, custard, all others CHO content must be counted Preferably serve with whipped/thin/double cream	Sugared jellies, iceblocks, sweetened toppings
Milk and Cheese	Preferred milk option is milk substitute of cream diluted to taste or ketogenic nutrition supplement Full fat cheese CHO content must be counted	Milk

	ALLOWED	NOT ALLOWED
Beverages	<0.3g CHO/100g for undiluted beverages Low joule caffeine-free soft drinks and cordials, water, Bonox	Fruit juice, soft drinks and cordials containing sugar, flavoured milks, drinks containing caffeine
Biscuits	All, preferably high fat, or with high fat spread CHO content must be counted	Restrict high sugar biscuits
Miscellaneous	Soy sauce Tomato sauce/BBQ sauce (count CHO) Salt, pepper, herbs, garlic, ginger Whipped/thin cream/sour cream/double heavy cream – extra serves available Full fat mayonnaise. CHO content must be counted Fat supplements (eg MCT or LCT) Sugar-free lollies	Sugar, lollies, chocolate, glucose polymer Standard nutritional supplement drinks

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Diet: Ketogenic Modified Atkins

Aim: To provide a carbohydrate (CHO) controlled diet to assist in the management of seizures.

Characteristics: CHO is controlled using exchanges, which are weighed in grams or portion controlled. High fat, high protein foods are encouraged. Ketogenic nutritional supplement may be given as a milk substitute or meal replacement. CHO free fluids and low joule drinks are permitted. Each diet must be individualised for each patient. Compared with other ketogenic diets, menu items that do not contain significant amounts of CHO are likely to be expressed in serves rather than grams. Other items may be expressed in grams or partial serves (eg ½ fresh apple, 70g mashed potato). This diet is far less restrictive than the ketogenic – classic/MCT diet. The diet may be commenced with 10g per day of carbohydrate, increased to 15g per day at one month and then to 20-30g per day thereafter as tolerated or as determined by the clinical dietitian.

Diet Type	% Energy from Fat	% Energy from Protein	% Energy from CHO
Modified Atkins Diet	Approx 60%	Approx 30%	Approx 10%

Nutrition diagnosis: Not Applicable

Indications: Used to help control refractory epilepsy.

Nutritional adequacy: Can be nutritionally adequate with the inclusion of a ketogenic nutrition supplement.

Precautions: *Must only be initiated under the supervision of a Neurologist and experienced clinical dietitian.* Must be planned individually and managed by an on-site clinical dietitian on a meal-by-meal basis. Any change to nutrient composition/food substitutions may directly affect seizure control and medication requirements. Facility must be provided for meals to be prepared and plated in an on-site kitchen according to the clinical dietitians' instruction.

Assessment and frequent review by a dietitian is essential for all patients on this diet. Ongoing follow-up and comprehensive education of the patient and their family onto the Ketogenic Modified Atkins diet is important for its success. Menu serve sizes of CHO must be determined by the dietitian.

Ongoing medical and clinical dietetic review and support is essential for patient safety.

Specific Menu Planning Guidelines: (The clinical dietitian may override these guidelines at their discretion)

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All. High fat preferable, such as fried and roast meats, creamy sauces. CHO content must be controlled, defined by individual requirements	None
Sauces, Gravies	All. Extra serves available. CHO content must be counted	None
Starchy Vegetables/ Pasta/Rice	All. CHO content must be counted	None
Vegetables	Maximum $\frac{3}{4}$ cup per meal total of “free” vegetables: alfalfa, asparagus, beans, bok choy, broccoli, brussels sprouts, cabbage, capsicum, carrot, cauliflower, celery, cucumber, eggplant, leek, lettuce, mushrooms, onion, silverbeet, spinach, sprouts, squash, snow peas, tomato, zucchini, avocado (fat content must be counted) All other veg allowed, but CHO must be counted Serve with butter/margarine/cream/oil preferably	None
Soups	All. Serve with cream/sour cream. CHO content must be counted	None
Sandwiches	May request partial serves (eg $\frac{1}{4}$) All. High fat spreads and fillings preferable CHO content must be counted	None
Salads, Dressings	Vinegar, oils, mayonnaise All full fat salad dressings Maximum $\frac{3}{4}$ cup free vegetable per meal	Low fat salad dressing (containing sugar)
Breads, Cereals	All. CHO controlled	
Spreads	Butter, margarine, Vegemite™, peanut butter Extra serves butter/margarine available	Jam, honey
Hot Breakfast Choices	All. CHO content must be counted	None
Fruit	Fresh fruit, canned fruit drained, or in water CHO content must be counted	Canned fruit in syrup, dried fruit
Yoghurt	Full fat yoghurt	Reduced fat yoghurt
Desserts	Diet jelly, all others. CHO content must be counted Serve with whipped/thin/double cream	Sugared jellies, iceblocks, sweetened toppings
Milk and Cheese	Preferred milk option is milk substitute of cream diluted to taste or ketogenic nutrition supplement Full fat cheese CHO content must be counted	Reduced fat milk

	ALLOWED	NOT ALLOWED
Beverages	<0.3g CHO/100g Low joule caffeine-free soft drinks and cordials, water, Bonox Ketogenic nutrition supplement	Fruit juice, soft drinks and cordials containing sugar, flavoured milks
Biscuits	All, preferably high fat, or with high fat spread CHO content must be counted	Restrict high sugar biscuits
Miscellaneous	Soya sauce Tomato sauce/BBQ sauce (count CHO) Salt, pepper, herbs, garlic, ginger Whipped/thin cream/sour cream/double heavy cream – extra serves available Full fat mayonnaise Fat supplements (MCT, LCT) Sugar-free lollies	Sugar, lollies, chocolate, glucose polymer Standard nutritional supplement drinks

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Diet: Protein – High Paediatric

Aim: To provide a diet containing approximately 120% protein (average 15g extra per day) than can be achieved on the Full diet alone. This diet also provides approximately 125% energy of the Full diet.

Characteristics: Full diet plus addition of extra high protein foods and supplements. Often combined with a high energy diet. Extra serves and large serves to be available. Mid meals should contain protein.

Mid-meals: AM: Half protein containing sandwich + full fat protein enriched milk + extra as desired

PM: Cheese and biscuits + full fat protein enriched milk + extras as desired

Supper: Yoghurt + extras as desired.

Milk-based desserts should be available at both lunch and dinner.

Nutrition diagnosis:

- NI-5.7.1 Inadequate protein intake
- NI-1.2 Increased energy expenditure
- NI-1.1 Hypermetabolism
- NI-2.1 Inadequate oral food/beverage intake
- NI-5.1 Increased nutrient needs
- NI-5.2 Evident protein-energy malnutrition
- NI-5.3 Inadequate protein-energy intake
- NC-2.1 Impaired nutrient utilization
- NC-3.1 Underweight
- NC-3.2 Involuntary weight loss

Indications:

- Weight loss or decreased food intake
- Protein energy malnutrition
- Failure to thrive
- Inability to eat sufficient volume (eg Disability, may be combined with texture modified)
- Oncology
- Burns
- Respiratory conditions
- Congenital cardiac anomalies
- Liver failure

For Cystic Fibrosis, see separate CF diet.

Nutritional adequacy: Nutritionally adequate.

Precautions: Dietitians may need to order high-protein nutritional supplements.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	All Extra serves to be available Add cheese to main dishes where appropriate	
Sauces, Gravies	All Include white sauces/cheese sauces	
Starchy Vegetables/ Pasta/Rice	All. High-protein mashed potato made with skim milk powder and milk and/or cheese topping	
Vegetables	All	
Soups	Cream soups, high-protein soups made on milk and added skim milk powder Offer Band 1 soup containing at least 5g protein at 2 meals per day	Clear soups
Sandwiches	All with protein containing filling such as meat, chicken, fish, eggs, cheese or peanut butter All Band 1 sandwiches providing at least 10g protein per serve	

	ALLOWED	NOT ALLOWED
Salads, Dressings	One Band 1 salad per day containing at least 20g protein, all others to be Band 2 providing at least 10g protein per serve	
Breads, Cereals	All	
Spreads	All	
Hot Breakfast Choices	All to contain protein (eg eggs, baked beans, bacon, sausage)	
Fruit	All fruit Preferably served with yoghurt or custard	
Yoghurt	All	
Desserts	All others High-protein custards made on milk and skim milk powder/egg Offer one Band 1 dessert at 2 meals per day	Fruit or jelly served without milk dessert, icecream
Milk and Cheese	All Fortify milk with skim milk powder Offer milk drink with every meal and at mid-meals All cheeses	
Beverages	All	
Biscuits	All	
Miscellaneous	One choice per midmeal to contain protein (eg cheese/Band 1 dessert/milk/Band 1 sandwich) Extra midmeals to be available High-protein nutritional supplements Sugar	

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Diet: Protein – Reduced (Metabolic)

Aim: To provide a reduced protein intake but adequate energy intake, for patients who are unable to metabolise normal protein intake.

Characteristics: Diet includes no animal protein, no dairy, no soy/legumes or nuts. Bread, pasta, biscuits and cereal are tolerated, but special commercial low protein products may be ordered as an alternative to adjust protein intake to meet individual requirements. To maintain adequate energy intake, high energy supplements may be needed such as sugars, glucose polymers and fats. Nutritional supplements of amino acids and/or vitamins and minerals are required for nutrient adequacy but need to be prescribed depending on the metabolic disorder and dietary intake.

Each individual patient's meal plan needs to be planned by a dietitian in consideration of the specific metabolic disorder and patients' requirements. The requirements may change during the admission depending on clinical need and biochemical monitoring.

Nutrition diagnosis:

- NI-4.2 Excessive bioactive substance intake
- NI-5.7.2 Excessive protein intake
- NI-5.7.3 Inappropriate intake of amino acids
- NC-2.1 Impaired nutrient utilisation
- NC-2.2 Altered nutrition-related laboratory values (ammonia, plasma amino acids, plasma/urinary organic acids)

Indications: For patients with inborn errors of protein metabolism who have moderate tolerance of protein based on biochemical monitoring appropriate for their metabolic conditions, eg Hyperphenylalaninaemia, some organic acidaemias, some urea cycle disorders.

Metabolic disorders are rare but increasingly diagnosed and managed throughout the lifecycle. Treatment protocols are different for different conditions. An individual's treatment protocol will also change with age and with biochemical monitoring and can change throughout the admission.

Nutritional adequacy: Nutritionally inadequate – must be used in conjunction with prescribed dietary supplement(s). Energy needs must be met for adequate metabolic control. This diet will be inadequate in many nutrients including vitamin B12, iron and calcium unless supplemented. The diet must be planned for each individual patient by a dietitian and regular follow-up provided.

Precautions: *Must only be used when ordered by a physician and under supervision of a dietitian.*

Prolonged use may precipitate metabolic crisis.

Where appropriate, should be used in conjunction with prescribed dietary supplement. Specific daily amounts of dietary supplements may be required and intake of these needs to be monitored.

This diet is a baseline diet only that will need to be modified dependent on the individual patients' tolerance of protein. Tolerance of protein will depend on patients' age, weight, height, growth rate and medical condition and may change during the course of a hospital admission.

Assessment and follow up by a dietitian is essential. Growth, weight, and nutrient intake must be monitored as these can be compromised on such a restrictive diet. Regular biochemical monitoring is essential to prevent metabolic crisis and ensure nutritional adequacy.

Special low protein products are not essential for this baseline diet, but may be ordered by a dietitian if the individual patient has a lower protein tolerance.

Some metabolic conditions have specific treatment to be followed during illness, which may differ from the diet the patient usually follows. Medical status of patient must be assessed before deciding on degree of dietary restriction.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	Vegetarian main dishes <8g protein per serve Added oil, margarine, cream/sour cream (portion controlled servings)	Any containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes, vegetarian products (eg TVP)
Sauces, Gravies	Cream/sour cream, sweet and sour sauce, tomato based sauces Tomato sauce Commercial mayonnaise Single portion controlled soy sauce	Meat/chicken/fish based gravy or stock, milk or cheese sauce, yoghurt
Starchy Vegetables/ Pasta/Rice	Pasta, rice, potatoes, couscous Low protein products such as low protein pasta and low protein rice may be used Serve with 10g margarine/10g butter/10mL oil	Dishes if prepared with the addition of meat, milk, egg, cheese, yoghurt, nuts or legumes
Vegetables	All vegetables other than legumes or individual serves of peas Serve with 10g margarine/10g butter/10mL oil	Legumes Peas as an individual serve or main ingredient in a vegetable dish Any other vegetables prepared with the addition of meat, milk, cheese, yogurt or nuts
Soups	<5g protein per serve Tomato, pumpkin or vegetable soup containing vegetable stock or cream/sour cream	Any containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes, peas, meat/fish/chicken stock
Sandwiches	<8g protein per serve (ie 2 slices + filling) Standard bread (or may use low protein bread) with margarine/butter and low protein fillings (eg cucumber, tomato, salad vegetables, commercial mayonnaise, jam, honey, Vegemite™) Use 2 x serve spread	Fillings of meat, chicken, fish, cheese, nut pastes, egg
Salads, Dressings	<5g protein/serve (can include appropriate Band 3 salads) Salad vegetables (eg carrot, cucumber, capsicum, tomato, eggplant, lettuce, etc) Serve with high fat dressings (eg French dressing of oil and vinegar/lemon) Mayonnaise, tomato sauce	Any salads containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes or large proportion of peas
Breads, Cereals	Standard breads and cereals Low protein bread and low protein breakfast cereals may be required	None, except those that contain meat/cheese/nuts
Spreads	Margarine, butter, jam, honey, Vegemite™	Peanut butter, fish pastes, hazelnut spread
Hot Breakfast Choices	Fried/grilled plain or herbed tomato, mushrooms, hash-browns, pancakes made with egg replacer and milk substitute, corn/creamed corn, tinned spaghetti	All others, including eggs, bacon, sausages, baked beans
Fruit	All fruit – fresh, canned, cooked or dried Serve with 20mL cream or 20mL glucose polymer syrup to fortify energy	

	ALLOWED	NOT ALLOWED
Yoghurt	None	All
Desserts	<4g protein per serve Jelly made from vegetable gum Low protein custard made on milk substitute, cream and custard powder Creamy rice made on rice and milk substitute or cream	All others including egg and gelatine Diet jelly
Milk and Cheese	<0.4g protein/100mL milk substitute Rice beverage not containing chickpeas, commercial low protein milk alternatives and prescribed nutritional supplements Cream cheese (small portion only)	Milk Cheese
Beverages	Fruit juice, soft drinks/cordials containing sugar Energy content of drinks may be fortified with glucose polymer/fat supplement/cream	Drinks containing aspartame (additive numbers 951 and 962) or other artificial sweeteners Any beverages containing milk
Biscuits	Plain crackers and biscuits	None
Miscellaneous	Sugar, cream (portion controlled servings)	Nuts

Coffee whitener recipe: 12g coffee whitener made up to 100mL with water

Cream beverage recipe: 20mL cream made up to 100mL with water

9kJ/mL Glucose polymer syrup recipe: 56g glucose polymer added to 60mL water (makes 100mL)

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Diet: Protein – Minimal (Metabolic)

Aim: To provide a minimal protein intake while maintaining adequate intake of energy, for patients who are unable to metabolise normal or low protein intake.

Characteristics: Extremely low protein. Diet includes no animal protein, no dairy, no soy/legumes or nuts. Special commercial low protein products (bread, pasta, biscuits, cereal) must be used in place of regular breads and cereals. All fruits are allowed and a limited range of vegetables. To maintain adequate energy intake, high energy supplements are used such as sugars, glucose polymers and fats.

Nutritional supplements of amino acids and/or vitamins and minerals are required for nutrient adequacy but need to be prescribed depending on the metabolic disorder and dietary intake.

Each individual patient's meal plan needs to be planned by a dietitian in consideration of the specific metabolic disorder and patients' requirements. The requirements may change during the admission depending on clinical need and biochemical monitoring.

Nutrition diagnosis:

- NI-4.2 Excessive bioactive substance
- NI-5.7.2 Excessive protein intake
- NI-5.7.3 Inappropriate intake of amino acids
- NC-2.1 Impaired nutrient utilisation
- NC-2.2 Altered nutrition-related laboratory values (ammonia, plasma amino acids, plasma/urinary organic acids)

Indications: Patients with inborn errors of protein metabolism suffering from metabolic decompensation or elevated biochemistry, such as Phenylketonuria (PKU), Maple Syrup Urine Disease (MSUD), urea cycle disorders, organic acidaemias. Metabolic disorders are rare but increasingly diagnosed and managed throughout the lifecycle. Treatment protocols are different for different conditions. An individual's treatment protocol will also change with age and with biochemical monitoring.

Nutritional adequacy: Nutritionally inadequate – must be used in conjunction with a prescribed dietary supplement. Energy needs must be met for adequate metabolic control. This diet, without supplementation, will be inadequate in many nutrients including vitamin B12, iron and calcium. The diet must be planned for each individual patient by a dietitian and regular follow-up provided.

Precautions: *Must only be used when ordered by a physician and under supervision of a dietitian.* Short term use only. Prolonged use may precipitate metabolic crisis. Nutritionally inadequate.

Must be used in conjunction with prescribed dietary supplement(s) to provide appropriate amounts of amino acids and/or energy. Specific daily amounts of supplements will be required and intake must be monitored.

This diet may be used as a base for the addition of restricted amounts of protein containing food, as soon as clinically possible during an admission, on the basis of biochemical monitoring. Some metabolic conditions have specific treatment to be followed during illness, which may differ from the diet the patient usually follows. Medical status of patient must be assessed before deciding on the degree of dietary restriction.

Tolerance of protein will depend on patients' age, gender, weight, height, growth rate and medical condition, and may change during the course of a hospital admission depending on clinical state and biochemical monitoring.

Assessment and follow up by a dietitian is essential. Growth, weight, and nutrient intake must be monitored as these can be compromised on such a restrictive diet. Regular biochemical monitoring is essential to prevent metabolic crisis and nutritional inadequacy.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<p><2g protein per serve</p> <p>Vegetable casseroles with allowed vegetables/ combined with low protein rice/low protein pasta</p> <p>If <1000kJ/serve, add 10mL oil/ 10g margarine/20mL cream/20mL sour cream</p> <p>Added oil, margarine, cream/sour cream (portion controlled servings)</p>	<p>Any containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes, soy, vegetarian products (eg TVP)</p>
Sauces, Gravies	<p><1g protein/serve</p> <p>Cream in limited amounts, sweet and sour sauce, tomato based sauces</p> <p>Tomato sauce in portion controlled servings</p> <p>Commercial mayonnaise</p>	<p>Meat/chicken/fish based gravy or stock, milk or cheese sauce, yoghurt, Vegemite™, soy sauce</p>
Starchy Vegetables/ Pasta/Rice	<p><1g protein/serve</p> <p>Low protein pasta/low protein rice</p> <p>Low protein rice/low protein pasta dishes with <1g protein/serve</p> <p>If <500kJ/serve, add 10mL oil/1 portion controlled/15mL salad dressing</p>	<p>Potato, couscous</p> <p>Any dishes prepared with the addition of meat, milk or cheese</p>
Vegetables	<p><1g protein/serve</p> <p>All others, including carrot, tomato, capsicum, onion, zucchini, eggplant, cabbage, beetroot, lettuce, cucumber</p> <p>Serve with 2 x portion controlled butter/ margarine</p>	<p>Cauliflower, broccoli, pumpkin, potato, sweet potato, peas, corn, mushrooms, spinach, avocado, green beans, legumes</p> <p>Any prepared with the addition of meat, milk or cheese</p>
Soups	<p><1g protein per serve</p> <p>Tomato or vegetable soup containing vegetable stock or cream/sour cream</p> <p>Serve with 20mL cream/20mL sour cream/ 20mL Glucose polymer syrup (see recipe below)</p>	<p>Any containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes, potato, peas, corn, or other not allowed vegetables, soy sauce</p> <p>Meat/chicken/fish stock</p>
Sandwiches	<p><1g protein/serve (2 slices bread + filling)</p> <p>Low protein bread only with margarine/butter and low protein fillings (eg cucumber, tomato, salad vegetables, commercial mayonnaise, jam, honey)</p> <p>Use 2 x serve spread</p>	<p>All others</p>
Salads, Dressings	<p><1g protein/serve (can include appropriate Band 3 salad)</p> <p>Salad vegetables (eg carrot, cucumber, capsicum, tomato, eggplant, lettuce, etc)</p> <p>Serve with high fat dressings such as French dressing of oil and vinegar/lemon</p> <p>Mayonnaise</p>	<p>Any containing meat, chicken, fish, egg, milk, cheese, yoghurt, soy, nuts, legumes, potato, peas, corn, other not allowed vegetables, soy sauce</p>

	ALLOWED	NOT ALLOWED
Breads, Cereals	<0.3 g protein/serve Low protein bread and low protein breakfast cereals only Serve with low protein milk substitute	All others including standard breads, cereals, breakfast cereals
Spreads	Margarine, butter, jam, honey 2 serves per meal	Peanut butter, Vegemite™, fish pastes, hazelnut spread
Hot Breakfast Choices	Fried/grilled plain or herbed tomato	All others, including eggs, bacon, sausages, hash-browns, mushrooms
Fruit	Other fruit – fresh, canned in syrup, or cooked Serve with 20mL glucose polymer syrup/ 20mL cream in portion controlled servings to fortify energy	Banana, passionfruit, dried fruit
Yoghurt	None	All
Desserts	<1 g protein/serve Jelly produced with vegetable gum and glucose polymer Low protein creamy rice made on low protein rice and milk substitute Low protein custard made on milk substitute and low protein custard powder Cream in limited amounts If <700kJ/serve, serve with 20mL cream or 20mL glucose polymer	All others including dairy desserts, jelly containing gelatine
Milk and Cheese	<0.4g protein and >400kJ/100mL milk Rice beverage not containing chickpeas with added glucose polymer or fat Commercial low protein milk alternatives and prescribed nutritional supplements Coffee whitener (<i>see recipe below</i>) Cream beverage (<i>see recipe below</i>)	Milk Cheese
Beverages	Fruit juice, soft drinks/cordials containing sugar Energy content of drinks to be fortified to 4.2kJ/mL with protein free energy supplement (eg glucose polymer or fat)	Drinks containing aspartame (additive numbers 951 and 962) or other artificial sweeteners Any beverages containing milk or soy protein
Biscuits	<0.2g protein/serve Low protein crackers and biscuits only Serve crackers with butter/margarine	All others, such as standard commercial sweet and savoury biscuits and crackers
Miscellaneous	Sugar, cream (portion controlled servings)	Artificial sweeteners

Coffee whitener recipe: 10g coffee whitener + 10g glucose polymer made up to 100mL water

Cream beverage recipe: 20mL cream + 10g glucose polymer made up to 100mL with water

9kJ/mL Glucose polymer syrup recipe: 56g glucose polymer added to 60mL water (makes 100mL)

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Diet : Sodium – Low Paediatric (No Added Salt)

Aim: To limit the sodium intake while including foods from all food groups. No specific goal for sodium.

Characteristics: No added salt during cooking and consumption of food. Limits foods high in sodium such as preserved, canned and processed meats, commercially prepared foods, sauces, high salt spreads and flavourings, salty snack foods. Specialised reduced sodium products may be used if available. Fresh foods are preferred. Nutrient-dense foods may be required to help meet energy and nutrient needs. Some high sodium foods which are also good sources of calcium and protein are allowed.

Nutrition diagnosis: NI-5.10.2(7) Excessive mineral intake (sodium).

Indications:

- Acute or chronic renal failure
- Nephrotic syndrome
- Fluid restriction
- Haemodialysis/Peritoneal Dialysis
- Diabetes insipidus
- Oedema
- Hypertension

Nutritional adequacy: Nutritionally adequate

Precautions: No salt sachets are provided on the meal trays. Salt or sodium restriction in paediatrics should be linked to clinical indications. Sodium restriction may be recommended for a period of time in response to clinical indications and then may be lifted once clinical improvement occurs. A liberalised diet is important to help a child meet energy and nutrient needs, while maintaining fluid balance and normal biochemistry.

Diet may be used in conjunction with Fluid Restriction Paediatric.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	No added salt in cooking Use low salt stock Use tuna/salmon canned in water	Bacon, sausages, frankfurts, salami, pies, smoked fish, corned silverside, commercially prepared foods such as chicken nuggets, fish fingers, spring rolls
Sauces, Gravies	Low salt gravy and sauces Tomato sauce as portion control, mayonnaise	Gravy/sauces made with salt/high salt stock Salad dressing Sauces made with cheese Soy sauce Seasoning mixes
Starchy Vegetables/ Pasta/Rice	All without added salt	Potato chips, wedges with added salt
Vegetables	All, no added salt in cooking	
Soups	<6mmol (138mg) sodium per serve	All others
Sandwiches	Fillings of salad, egg, roast meats, tuna/salmon canned in water, cheese	Fillings of processed meat such as ham, salami, corned silverside Vegemite™
Salads, Dressings	All, canned vegetables in spring water (<120mg sodium/serve), salmon/tuna canned in spring water Vinegar, lemon juice/wedge	All other dressings
Breads, Cereals	All	

	ALLOWED	NOT ALLOWED
Spreads	Jam, honey Low salt peanut butter	Vegemite™
Hot Breakfast Choices	All others (eg eggs, pancakes, tomato, mushrooms, reduced salt baked beans)	Bacon, sausages, canned spaghetti, hash browns
Fruit	All – fresh, canned, dried	
Yoghurt	All	
Desserts	All	
Milk and Cheese	Milk Hard cheese, cottage cheese, ricotta	Processed cheese
Beverages	All	
Biscuits	Plain crackers and sweet biscuits (<600mg sodium per 100g)	All others
Miscellaneous	Use herbs or lemon/vinegar for flavouring in place of salt	Salt sachet, savoury snack foods (eg chips, pretzels, salted nuts)

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8. National Kidney Foundation *Kidney Disease Outcome Quality Initiative* http://www.kidney.org/professionals/kdoqi/guidelines_commentaries.cfm#guidelines (accessed 20 May 2011)
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Diet: Phosphate – Low Paediatric

Aim: To provide a diet that is low in phosphate: approximately 400-800mg per day depending on the age of the child.

Characteristics: Restricts processed meats in favour of unprocessed cuts of meat to lower phosphate intake while maintaining high biological protein sources. Restricts foods with additives high in phosphorus such as packaged foods and bakery goods. Milk cheese, soy and soy alternatives are limited to 1-2 serves per day.

High energy, nutritious foods are encouraged to help meet energy and nutrient needs.

Nutrition diagnosis:

- NI-5.10.2(6) Excessive mineral intake (Phosphate)
- NC-2.2 Altered nutrition-related laboratory values (Serum Phosphate)

Indications:

- Haemodialysis/peritoneal dialysis
- Renal failure
- Hyperphosphataemia
- Secondary hyperparathyroidism
- Chronic renal disease

Nutritional adequacy: Nutritionally adequate.

Precautions:

Protein intake needs to be maintained for growth requirements and increased needs due to losses for patients on dialysis. Patients requiring low phosphate tend to have poor appetite due to underlying condition. Choice of high biological value protein in place of processed products assists in meeting all nutrient goals.

Meat should be limited to 2 serves per day. Milk products should be limited to 1-2 serves per day.

Phosphate binders are usually used in conjunction with a low phosphorus diet. These need to be taken with meals and snacks containing phosphate.

In some cases a low phosphate diet is needed together with a high protein diet, and the dietitian may then prescribe higher levels of protein foods than normally allowed on this diet (eg including eggs at breakfast).

Age of child will determine phosphate tolerance and thus restriction required.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<300mg Phosphate per full serve Unprocessed meats such as lamb/beef/chicken – all roasted/grilled/braised/casseroled Fish grilled/steamed Canned salmon, tuna and sardines Eggs Legumes, baked beans Tofu	Processed meats (eg bacon, corned beef/silverside, devon, frankfurts, ham, sausage, salami) Preserved fish (eg smoked salmon, smoked tuna) Offal (eg brains, liver) Crumbed meats/fish/chicken Dishes containing cheese (eg cheese sauce, cheese mornay, white sauce)
Sauces, Gravies	All others	Cheese and white sauces
Starchy Vegetables/ Pasta/Rice	White rice White pasta Potato	Brown rice Wholemeal pasta Dishes with cheese and white sauces
Vegetables	All others Legumes, baked beans	Mixed beans, mushrooms Vegetables served with cheese or white sauce
Soups	All others	Cream soups made with milk

	ALLOWED	NOT ALLOWED
Sandwiches	All on white bread Salad, roast meats, egg, tuna, salmon Hard cheese limited to 20-30g per day	Wholegrain/wholemeal bread Processed meats, smoked fish, ham
Salads, Dressings	All others, including cottage cheese Hard cheese limited to 20-30g per day	Ham, processed meats and corned beef
Breads, Cereals	All white bread, rice cakes Rolled oats made on water Weet-Bix™ All others	Bran-based and high fibre cereals Muesli, rolled oats made on milk Oat bran
Spreads	Margarine, butter, jam, honey	Peanut butter, Vegemite™, Marmite™
Hot Breakfast Choices	All others (eg egg, baked beans, creamed corn, tomato, mushrooms, canned spaghetti)	Sausages, bacon
Fruit	All other fresh and canned fruit	Dried fruit
Yoghurt	None	All
Desserts	All others, including icecream and jelly	Custard, milk puddings Desserts made with dried fruit Chocolate cake or pudding Fruit cake Bakery goods such as commercial cakes, croissants, pastries
Milk and Cheese	Dairy limited to 1-2 serves per day including milk on cereal and depending on age May include hard cheese limited to 1 serve per day (20-30g) Cottage and ricotta cheese Cream cheese Cream	Custard
Beverages	All others, including non-cola based soft drinks, juice, cordial Milk and soy beverage as part of dairy allowance (1-2 serves per day)	Milo®, Aktavite®, Ovaltine®, cocoa and cola based soft drinks
Biscuits	Plain refined flour biscuits (eg Milk Arrowroot™, Milk Coffee™) Rice cakes	Chocolate biscuits; wheatmeal biscuit
Miscellaneous	Cream, sugar, herbs and spices	Nuts, seeds, coconut, dried fruit, chocolate

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Diet: Potassium – Low Paediatric

Aim: To provide a potassium-controlled diet to minimise the occurrence and degree of hyperkalemia.

Characteristics: Restrict foods containing more than 390mg potassium (10mmol) per standard serve. Foods that contain moderate amounts of potassium are allowed, but quantity of serves/serving size may be limited. Two serves per day of dairy to meet calcium and protein needs is required. Boost energy intake with sugars, fats and energy supplements as required.

Level of potassium restriction will vary with the age of the child, medical condition and clinical indicators (serum potassium level). Energy intake needs to be maintained to assist in potassium regulation and to meet energy requirements.

Nutrition diagnosis:

- NI-5.10.2(5) Excessive mineral intake (Potassium)
- NC-2.2 Altered nutrition-related laboratory values (Serum Potassium)

Indications:

- Haemodialysis/peritoneal dialysis
- Renal failure
- Elevated serum potassium levels

Nutritional adequacy: This diet should be nutritionally adequate. Nutrients that may need additional supplementation however include: fibre, magnesium, calcium and zinc.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	<10mmol (390mg) potassium per serve Dishes made from fresh/roast or grilled meat Fish, chicken, eggs, tofu, legumes or lentils Use fresh tomato instead of tomato paste	>10mmol (390mg) potassium per serve
Sauces, Gravies	All when included as part of main meal allowance	
Starchy Vegetables/ Pasta/Rice	<7mmol (270mg) potassium per serve Potato, pumpkin and sweet potato: boiled twice, changing the water in between Pasta/rice	>7mmol/serve (270mg) potassium per serve Potato/sweet potato – steamed, baked, jacket, chips Potato crisps Pumpkin, baked
Vegetables	<5mmol (195mg) potassium per serve Alfalfa sprouts, asparagus, cabbage, capsicum, cauliflower, carrots, celery, frozen corn, cucumber, eggplant, green beans, lettuce, onion, squash, zucchini – limit 2-3 serves per day, boiled preferable to steamed	>5mmol (195mg) potassium per serve Artichoke, beetroot, broccoli, brussels sprouts, fresh corn, mushrooms, tomato, silverbeet, spinach Canned beans (eg kidney, lima, navy) Dried peas (eg chickpeas, lentils, split peas)
Soups	None	All types
Sandwiches	White bread	Wholemeal bread
Salads, Dressings	<15mmol (585mg) potassium per full salad serve <10mmol (390mg) potassium per side salad Dressings – portion control only	All others
Breads, Cereals	All white bread and muffins Most plain breakfast cereals (eg oats, Weet-Bix™, cornflakes, Rice Bubbles®)	Wholegrain and wholemeal Bran cereals, and those with added fruit (eg Sultana Bran®, Just Right®, muesli)
Spreads	Butter, margarines, jam, honey	Vegetemite™, peanut butter

	ALLOWED	NOT ALLOWED
Hot Breakfast Choices	All others – eggs, bacon, sausages, canned spaghetti	Baked beans Hash brown
Fruit	Apple, berry fruits, cherries, grapes, kiwi fruit, mango, peaches, pears, pineapple, plums, watermelon Canned fruit in water, drained – two fruits, peaches, pineapple, pear	Apricot, avocado, banana, honeydew, kiwifruit, mango, melon, orange, rhubarb All dried fruits Canned fruit in juice
Yoghurt	Yoghurt as part of 2 dairy serves per day total	
Desserts	<5mmol (195mg) potassium per serve Plain cake, pavlova, jelly, apple sponge, creamy rice Custard, icecream and yoghurt as part of 2 dairy serves total	All others
Milk and Cheese	2 serves dairy per day include milk, cheese, custard, yoghurt, soy and soy alternatives	Protein enriched milk (eg Shape™)
Beverages	Cordial, soft drinks, apple juice Milk or milk alternatives as per dairy allowance	Orange, tropical and vegetable juices Milo®, cocoa
Biscuits	Plain crackers and biscuits (eg Sao™, Milk Arrowroot™, Morning Coffee™)	Chocolate, wholemeal or fruit biscuits
Miscellaneous	Rice snacks, corn chips Garlic, herbs, spices, vinegar Chutney and pickles (small amounts only)	Potato crisps Nuts MSG

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Diet: Rehydration Fluids

Aim: To provide a source of clear fluids to replace or maintain the body's water balance.

Characteristics: Provides diluted clear liquids only. All fat containing liquids are excluded with the exception of breast milk and infant formula for infants. Fluids are offered frequently in small amounts to meet goal of 1mL/kg every 10mins or about 5mL/kg given every hour.

Nutrition diagnosis: • NI-2.1 Inadequate oral food/beverage intake.

Indications: Gastro-enteritis or acute diarrhoea/vomiting illness

Nutritional adequacy: This diet is inadequate in all nutrients and should not be used as the sole source of nutritional support for more than 24 hours.

Precautions: Infants and children with gastroenteritis require additional fluids to prevent dehydration, or for rehydration. Monitor regularly for signs of dehydration. High fluid losses with diarrhoea or vomiting will require high fluid intake. Careful calculations are required when monitoring fluid intake and intake of solids containing fluids. Children who have diarrhoea and are not dehydrated should continue to be fed age appropriate diets including solids and will not need this diet. Children who required rehydration and commence this diet should resume age appropriate diets within the first 12-24 hours.

Patients do not receive a menu.

Specific Menu Planning Guidelines:

	ALLOWED	NOT ALLOWED
Hot Main Dishes	None	All
Sauces, Gravies	None	All
Starchy Vegetables/ Pasta/Rice	None	All
Vegetables	None	All
Soups	Fat-free clear soup and broths	Cream soup or with visible food pieces
Sandwiches	None	All
Salads, Dressings	None	All
Breads, Cereals	None	All
Spreads	None	All
Hot Breakfast Choices	None	All
Fruit	None	All
Yoghurt	None	All
Desserts	Plain jelly, sorbet	All others
Milk and Cheese	None	All

	ALLOWED	NOT ALLOWED
Beverages	Water, cool, boiled Breast milk/Infant formula as directed by medical team/dietitian ¼ strength apple juice ¼ strength pulp-free fruit juice ¼ strength cordials ¼ strength soft drin Oral rehydration solutions	Cows'/goats milk Soy beverage Prune juice Low joule soft drink/cordial Full strength (undiluted) juice/soft drinks Tea/coffee All others
Biscuits	None	All
Miscellaneous	Plain boiled sweets, gums and jubes Commercial rehydration fluids. Commercial high energy, fat-free, milk-free nutritional supplements. Sugar	

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APPENDIX

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South Eastern Sydney	Far West NSW	Northern NSW
South Western Sydney	Hunter New England	Sydney Children's Hospital Network
Sydney	Mid North Coast	





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